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ABSTRACT

A broad range of data and data sources useful in educational planning are identified along with some of the problems in collecting and using that data, and several systematic approaches for analyzing groups of community data are described. The place of a community profile as a data-collection, information-generating process in a comprehensive planning model is defined. The roles played by the profiling team--citizens, consultants, and school administrators--in the process are outlined, and the collection and analysis activities within a master planning context are defined. Specific data elements relevant to educational planning are detailed and assigned to categories of community resources, community concern, land use, and population. In each of the four subsections, data sources and collection and analysis approaches are provided. A population/enrollment simulation model developed for use in both increasing and decreasing enrollment areas is described in terms of its required input that originates from a community profiling effort. A number of publications useful in understanding and executing a community profile are provided in the bibliography. (Author/MLF)

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COMMUNITY PROFILE

A Comprehensive Base for Educational Planning

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Richard D. Cornish
Joseph D. Gibbons
Lester W. Hunt

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PROJECT SIMU-SCHOOL
Santa Clara County Component
165 Skyport Drive
San Jose, California 95110

COMMUNITY PROFILE

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FOREWORD

When it was formed in 1972, Project Simu School: Santa Clara County Component had as one of its major objectives the development and testing of techniques which would enable planners to better understand communities in which educational systems function. In September, 1972, work started on Research Report #12, "Community Profile." Consultants from Educational Factors, Inc., contracted to prepare a preliminary document upon which to base a sort of "guide to community profiling." The guide was to be a definitive statement, general enough to be used in a wide range of planning situations but specific enough to offer a concrete approach for collecting and analyzing community data.

Early in 1973, however, project staff began to realize that no one could really define a "community profile." Large blocks of data descriptive of "community" had been identified as having relevance to educational planning, and some techniques for gathering and studying those data had been outlined. But there was general agreement that the preliminary study was just that--preliminary. There was still much to learn about what a community profile was, how it was pieced together, and how it was used in an educational planning effort. And so, for a time, work on the "definitive statement" was put aside.

But other work continued. Two master planning efforts were undertaken by staff. An enrollment simulation model based on fine-grained land use analysis was developed and implemented in two districts. A second simulation model, based on land use and migration patterns and requiring a large array of community data, was designed during another planning effort. Projects undertaken in other districts required that neighborhood profiles be assembled from U.S. Census data. Still other projects led staff to new sources of community information and new ways of looking at that information to solve educational problems. And gradually, the concept of community profile began to take on a real meaning.

Research Report #12, "Community Profile," is still not the definitive statement on understanding community. Nor is it a pat set of guidelines which will enable educational planners in any situation to thoroughly understand the community in which their school system functions. Instead, this paper presents a collection of data elements, information sources and analysis techniques which have proven useful in the planning activities undertaken by project staff since the formation of the Santa Clara County Component of Simu School in 1972. Staff members who have contributed to this collection are Shirley Langtry, Floyd Minana, Morgan Woollett, Joe Gibbons and Richard Cornish.

We also acknowledge the assistance of citizens' planning groups in Morgan Hill Unified School District, Gilroy Unified School District, Alum Rock Union School District, Sunnyvale School District, and Palo Alto Unified School District in their use and critique of community profile data compiled for their school committees.

Your application of the suggestions made herein will be successful to the extent that you determine the purpose of your study and select data accordingly. We hope that this exposition of community profile information will be of assistance to you.

Lester W. Hunt, Director
Project Simu School: Santa Clara County Component

The project presented or reported herein was performed pursuant to a grant from the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

INTRODUCTION

Successful school administrators have always known their community in an intuitive sort of way. They have had a "feel" for who lives there, for the community's assets and liabilities, its past and future. This intuitive understanding is what enables the administrator to deal with the day-to-day problems of his school system. Indeed, "feel for community" is an essential in the makeup of the educational decision maker.

In recent years, however, another level of community understanding, one based on measurable data rather than subjective intuition, has begun to characterize the successful administrator. During their planning activities, superintendents and their staffs have begun to look more closely at the communities they serve, and in so doing, have begun to assault a mountain of information.

Most data descriptive of a community have at least three basic similarities: they are scattered throughout the entire spectrum of public and private agencies; they are rarely stored in standard format or on convenient media; and, they are virtually useless unless analyzed systematically. While not insurmountable, these problems have caused many school planners to gloss over community analysis, choosing those data elements easiest to obtain and safest to translate into solutions.

It is the purpose of this paper to identify a broad range of data and data sources useful in educational planning, to point out some of the problems in collecting and using that data, and to describe several systematic approaches for analyzing groups of community data.

Presented herein are the following:

Community Profile - A First Step Toward Comprehensive Planning: defining community profile as a data collection, information generating process and describing its place in a comprehensive planning model.

Community Profiling - The Process: outlining the roles played by the profiling team--citizens, consultants and school administrators--and describing the collection and analysis activities within a master planning context.

Community Profile - The Composite Pieces of the Snapshot: detailing specific data elements relevant to educational planning, breaking the elements into four categories--community resources, community concern, land use and population. In each of the four subsections, data sources and collection and analysis approaches are provided.

Profiling the Future - A Population Projection Model: describing ENSIM II, a population/enrollment simulation model recently developed for use in both increasing and decreasing enrollment areas. The model is described in terms of its required input, all of which come directly from a community profiling effort.

Bibliography and Selected References: listing a number of publications useful in understanding and executing a community profile.

COMMUNITY PROFILE - A FIRST STEP TOWARD COMPREHENSIVE PLANNING

Community profiling is a data collection, information-generating process that can lead to better educational planning. Today,more than ever before, schools must reflect the existing and emerging conditions and needs of the communities they serve. Profiling offers a means of identifying those conditions and needs; or, in some cases, validating with statistical evidence what educators and citizens have intuitively felt about their community. The need for comprehensive school master planning and the increased necessity for accountability by state and local support agencies make community profiling a critical part of the planning process.

Planning cities and towns is not a new concept. Nearly every city in the nation had its beginnings with the filing of a plot showing a proposed layout of streets and alleys, city boundaries, public squares and city facilities. School planning, however, began with a single classroom and responded in the classic crisis mode to the influx of population into an area. The few plans made were based almost solely on information traditionally collected and held by the schools--enrollments, dropouts and transfers of past years, the availability of classrooms, etc.

In the past decade, of course, districts have begun to collect more detailed information. "School profiles," developed extensively during the 1960's, contain data about pupils, finances, personnel, facilities and instructional programs--in short, a wide range of traditional school data.

With the advent of computer technology has come a more systematic approach to capturing and analyzing school data. Several projects have addressed the subject of educational information systems and have contributed significantly to the art of educational planning. The Midwestern States Educational Information Project (MSEIP) was one of the first such comprehensive undertakings. Begun in 1966 and terminated in 1970, its design objectives were documented in a series of publications listed in this paper's bibliography. A second project, the California Educational Information System (CEIS), was started in 1962 and was extended into 1973. It is important to note that while both projects stressed comprehensiveness and while both outlined detailed and extensive data elements that should be captured and analyzed in the school profile, neither addressed itself to the myriad of community conditions that impact the school system.

This omission is an understandable one. The relationship between the school profile, made up of data traditionally held by the school system, and the community profile, made up of "fugitive" data outside the school system, becomes apparent only when the school is viewed as a subsystem within the community. Few educators would disagree that the school system is influenced by the state of the community it serves or that the problems of the community become the problems of the school. It is because of this causal relationship that the school profile--information about program, facilities, enrollments--is best evaluated and analyzed in light of a profile of the community.

Once gathered and studied, "fugitive" community data can greatly increase the decision maker's ability to meet the needs of the total community and to plan for a future that will be shaped not by the school system but by the community it serves. The community profiling process offers a system for this gathering and synthesis task. It is a process by which educationally relevant community data, generated by numerous community-based sources and analyzed into information by a broad-based planning group, is identified and focused on the educational needs of a specific neighborhood, attendance area, or school district. Community profile provides the critical link between community information and community/school decision makers. In short, it offers to the citizen and district administrator planners a composite snapshot of the community which, when analyzed, can paint a picture of the community's future state. Once the trends are understood and the future state is visualized, plans for meeting the future needs can be made.

Community profiling is an essential activity of citizen participation in planning. For the snapshot of the community to be accurate, to be complete, the citizens themselves should take part in the collection and validation of the composite pieces. Thus, a key ingredient of community profiling is the involvement of community members.

Simply stated, the dual purpose of community profiling is:

(1) To provide educationally relevant information about the community to the citizen/administrator planning group for their use in a comprehensive master planning effort; and

(2) To establish a community profile data bank to be used for ongoing local education agency decision making.

Use in a Master Planning Effort

The diagram on the following page represents one way of looking at the complex process of comprehensive planning. Such a process entails many activities, of which community profiling is but one. Initially, the community profiling effort provides the planning group with data with which to pull out and aggregate "information" about the community which has relevance for educational issues. Later when the aggregated pieces of the snapshot are pulled together, profiling helps the planners learn the answers to questions raised during the needs assessment, goal setting and program development period of the planning process. Finally, it offers a data base with which long-term evaluation and updating of the selected master plan can be achieved.

Use in Establishing a Community Profile Data Bank

Data collected and analyzed into information during the master planning effort can be used to establish a base for a community profile data bank. This data bank can be used as a highly effective tool in monitoring, on an ongoing basis, the character of the community. As changes in community become apparent, educational programs and facilities can then be designed and implemented to better meet the changing conditions and needs of the total community.

A COMPREHENSIVE PLANNING MODEL

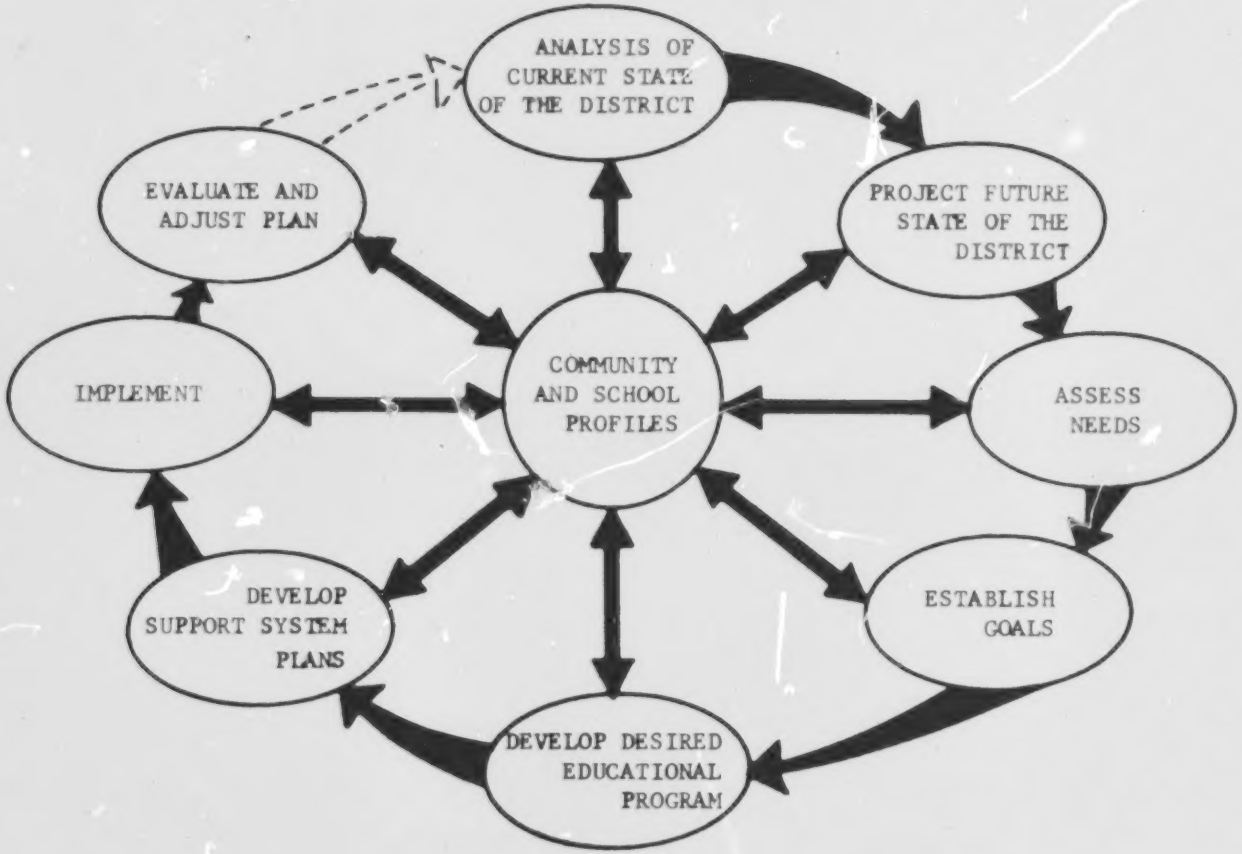


Figure 1

COMMUNITY PROFILING - THE PROCESS

The Who

Collecting community data and translating it into information useful for educational planning is a difficult task. It is the tedious leg work done before, during and after decision making. It is time consuming, sometimes frustrating, and seldom exciting. So, who does the work?

Community profilers fall into three basic categories: citizen planners; outside consultants, both paid and non-paid; and district or school staff.

For the community profiling effort to be effective, for it to produce a clear, useful picture of the community, all three kinds of profilers must perform their functions. There must be an interactive relationship, based on trust and mutual objectives, among all who are involved. At the outset, roles must be established, assignments must be made, and a system of sharing and cross-validating information must be initiated.

Citizen Planners: Of course, the role that each group plays in community profiling will vary from district to district, situation to situation. But one general rule of thumb exists--citizens must do all that they are able to do; first, because those who live and work in the community possess an intuitive sense about that community's future that no outside consultant or district administrator can bring into the planning group; and second, because plans made on the basis of a community study will have a much better chance for public acceptance if the study is done, or at least validated, by members of the general citizenry.

If the citizens planning group is to make decisions that will benefit the total community and if those decisions are to be translated into constructive action, the planning group must be appropriately constituted. First, the committee must be reflective of the entire community--its minorities, its geographic and political areas or neighborhoods, and its interest groups must be represented. Second, it must be made up of knowledgeable residents who are capable of bringing some informal, intuitive expertise about the community into the group. Third, the planning group must have authority. This authority may be given directly to the citizen committee by the school board or it may be won by recruiting district residents who have shown a degree of civic involvement and leadership.

Once the citizens' planning committee has been established and once its members have determined for themselves that the group is representative, a best first step is to break into subcommittees that focus on a particular educational issue or problem and then to let each member choose the subcommittee that holds special interest for him. For example, a realtor committee member, familiar with the district's housing, might choose to join a land use subcommittee; a banker or merchant might choose to join a community resources subcommittee, bringing with him his expertise in the local economy. Thus, all of the special skills and knowledge brought into the planning group can be utilized to the fullest.

Outside Consultants, Paid and Non-Paid: After the profiling subcommittee has identified the amount and nature of the information it will be responsible for collecting and after it has agreed upon the degree of sophistication to be used in the information's analysis, the need, or lack of need, for an outside consultant will become apparent. A land use subcommittee, for example, might find it necessary to hire a geography or planning student to do the more technical mapping and analysis of vacant district or neighborhood land. Or, it may be necessary for a population data subcommittee to contract help in understanding and making useful census data.

In every community, however, there is a wealth of descriptive data relating to the people and land of a specific geopolitical area and, the public agencies which have accumulated these data should be contacted and asked to assist in the profiling effort. Since schools are an important part of any community, their planning should be of concern to all agencies committed to the public interest. It is not unreasonable that, for example, a city or county planning department would assign a staff person to aid the planning group in the collection and analysis of community land use data.

Another source of non-paid consultation or help lies within the schools themselves. In many instances, high school social study or civics classes have been effectively enlisted as data collectors. Given academic credit for a class project, students who would otherwise be unmotivated to participate in planning schools they will never attend become a valuable resource. Good planning and careful coordination can make this kind of student involvement a time and money-saving tool in the community profiling effort.

District and School Staff: The role of the district or school administrator in community profiling should be that of a facilitator--someone who guides the group, assesses them of possible data sources and methods of analysis and display, but someone who does not control the group. A staff person should be assigned to each subcommittee to advise and assist and to act as secretary for the group. This is, of course, the ideal situation. The amount of time spent by staff on actual data collection will depend on both the commitment of the citizens and the involvement of outside consultants.

Once the community profiling effort has been completed and a master plan developed, however, it is the responsibility of the LEA administrator to shape the mass of community information into a community profile data bank which, when updated on a regular basis, will provide the administrator with an invaluable tool for making day-to-day decisions.

The When

Community profiling must occur throughout the planning process. As shown in Figure 1, A Comprehensive Planning Model, profiling provides information about the community at each juncture along the planning course:

(i) During the analysis of the current state of the district and the projection of the district's future state;

(2) During needs assessment and goal setting;

(3) During the development of the desired educational program;

(4) During the development and implementation of support systems;

(5) During the evaluation and adjustment of the master plan.

The bulk of the community data is collected and analyzed into information at the first juncture along the planning process. Since making plans for the future requires visualizing that future, profiling must first help the planning group speculate about the future state of the district. Such speculation can only occur when reliable, comprehensive information about the past and existing state of the district is collected, analyzed and properly displayed. From the display of information, trends will emerge which will lead the planning group toward a reasonable view of the future.

An example of this process of collection, analysis and speculation is shown in Figure 2. Data from three census tabulations, in this case the age breakdown of people living in a high school attendance area in 1966, 1970 and 1974, are used to make predictions about the school's future attendance. Note that in the example, trends emerge which strongly indicate that the high school in question will experience a drop in enrollment by 1978.

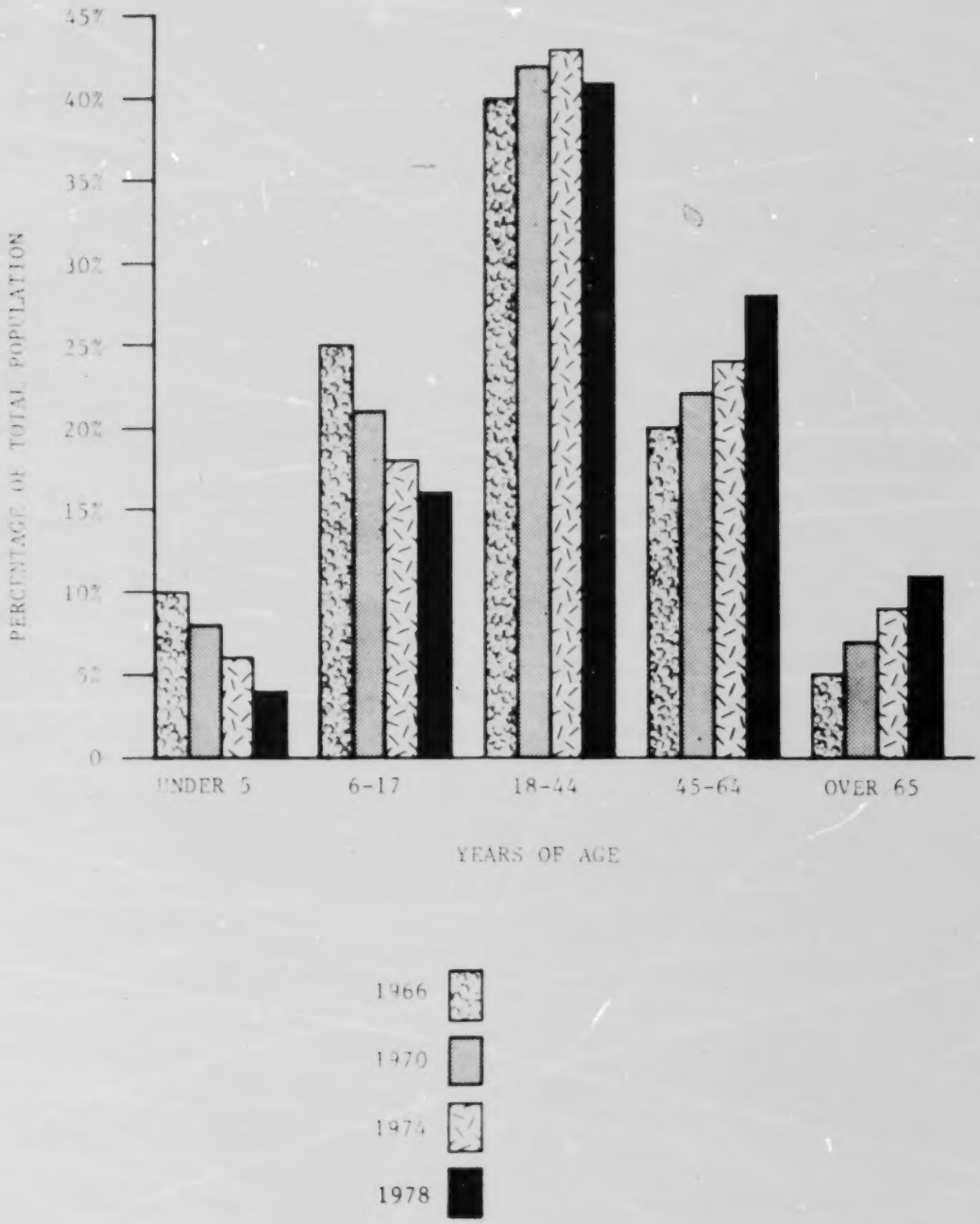
At the next three junctures along the planning path, the profilers are called upon to provide additional information with which the group can proceed. Questions raised about the community during goal setting, needs assessment and program development must be answered. In some instances, those questions will be answered by analyzing data already collected in a different fashion; while in other instances, the profilers will have to collect additional data from new sources.

Returning to the hypothetical attendance area, let us suppose that the high school planning group accepts the 1978 age breakdown projection as a reasonable likelihood. On the basis of the projection, a goal is set: in 1978, a substantial portion of the high school's classroom space will be used to meet the educational needs of a community whose population is predominantly 18+ years old. But, before the planning group can proceed, additional data about that community must be collected and studied. What kinds of programs will the adults need? What will their expectations of an adult education program be in the year 1978? Will they require job retraining or will the program's focus be recreational?

At this juncture in the planning process, the profilers must go back into the field and learn the answers to these and other questions. Perhaps questionnaires are sent to those who are expected to take part in the adult education program, or perhaps a series of "town hall" meetings are held, and the issues are discussed in an open forum. Still another approach might be to obtain a sample of opinion through personal

Figure 2

PERCENTAGE OF POPULATION AGE BREAKDOWN FOR
HIGH SCHOOL ATTENDANCE AREA X



interviews. In any case, the profiling group would be called upon to supply more information about the community before making any firm plans.

At the fifth juncture, the community profile provides continuous planning and decision-making information. That is, an updated data base with which to validate or invalidate predictions, evaluate the implemented master plan and make any necessary adjustments. The frequency with which this update process is performed will depend on the nature of the data in question. In the instance of the hypothetical high school attendance area planning effort, the update of age breakdown would not occur until another census was held. The community opinion data, however, could be collected on an ongoing basis.

It is at this fifth juncture that the LEA administrator assumes the responsibility of shaping a data bank from the community information amassed by the planning group and of continuing to collect updated data that will ensure that the bank reflects the current character of the community being served. As earlier stated, such a community profile data bank will serve as a tool for both administrative decision making and short-term planning.

The term "data bank" has come into common usage with the increasing availability of computer systems. The concept does not necessarily imply, however, that computer systems are needed to store and process data. A data bank is simply a means of collecting, storing and maintaining a variety of data about a specific subject in some format and on some media. Thus, a community profile data bank could be stored in a file cabinet, a keysort system or on a magnetic computer tape. Again, the sophistication of the data system depends on the capability and/or specific needs of the school district.

COMMUNITY PROFILE - THE COMPOSITE PIECES OF THE SNAPSHOT

The community profile must be a composite of a broad range of descriptive data about the district, attendance area or neighborhood under study. While specific data elements and their sources will vary from situation to situation, the information gathered should in all cases span both the public and private sectors to offer a total view of the community's assets and liabilities, problems and possible solutions.

In the following pages, four basic community profile data categories are discussed in some detail. The categories include: (1) community resource data; (2) community concern data; (3) land use data; and (4) population data.

In the four sections that follow, the usefulness of each category in the profiling effort is discussed and many of the data items and/or data sources are listed. The data listings are not meant to be comprehensive in scope. Rather, they are offered as a starting point for the planning group that wishes to use the community profiling technique in their decision-making effort.

Community Resource Data

Much can be learned about a community by examining its resources, both public and private. This data group should be comprised of a comprehensive inventory and analysis of social services and economic resources and should, after careful study, point up the unique needs and assets of a community.

Social Services: Particularly in a period of rising costs and belt-notching budgets, it is important for school planners to survey social services that might augment the programs of public education. Most obvious among those services are recreation department programs and facilities, public libraries, and public and private museums. There are, however, a number of other agencies and organizations in most communities which could help deliver better educational services to the total community. Church groups, colleges and universities, and even private business and industry often share educational programs and facilities with public schools.

The collection of data concerning these social services is a relatively simple activity and requires no real technical expertise beyond a basic knowledge of the community. On the following page, a data collection sheet offers some suggestions for the kind of information that could have value in planning future program and facilities. By simply comoleting such a form for each public or private agency or institution which might augment the school's program and facility needs, a valuable resource file can be established.

Following the data collection sheet is a listing of some potential resources that could be found in most communities. The listing is not meant to be exhaustive--the social services of a particular community will, of course, vary from locale to locale.

Figure 3

SOCIAL SERVICES DATA WORKSHEET

DATE 8/1/74

NAME OF AGENCY San Jose Civic Art Museum

ADDRESS 8 William Street, San Jose, CA

TELEPHONE 286-0987

	NAME	POSITION/TITLE
PERSONS TO CONTACT	William Pilgrim	Business Manager
	Dwayne Hoover	Curator
	Donald de Mers	Director

AGENCY PURPOSE OR SERVICE Public museum...charter is to serve the entire public...emphasis is on art and historic relics from Spanish Colonial period to 1920's.

AGE GROUP SERVED All

NUMBER OF MEMBERS OR CLIENTS City-wide

PROGRAMS	Guided tours	FACILITIES	Museum located at above address
	Adult training programs for tour guides		Print shop
	School exhibit program		Gift shop
			Seminar room/outside class space

NARRATIVE DESCRIPTION OF PROGRAMS AND FACILITIES The museum, located in the downtown area, was, during the first half of the century, a library.

REMARKS Don de Mers, Director of the museum, was anxious to develop cooperative programs with the school district...some facilities are available...wants to expand his school exhibit program.

Possible Community Resources

Public:

--juvenile probation department
--recreation and parks department
--public library
--community and state colleges
--police and sheriff's departments
--health department
--legal aide society
--fire department
--neighborhood youth corps
--state manpower development training
--drug abuse programs
--WIP (work incentive program)
--senior citizen's programs
--county social service agencies
--preschool programs
--public museums

Private:

--YMCA and YWCA
--Boys Club
--Boy Scouts of America
--Girl Scouts of America
--Catholic Youth Organization
--Council of Churches
--private colleges and universities
--Kiwanis, Lions, Elks, etc. Clubs
--parochial and private schools
--nursery schools
--Salvation Army
--public relations departments of local business and industry
--National Alliance of Businessmen
--National Association of Independent Businessmen
--Chamber of Commerce
--United Fund

Economic Data: Economic data is a key indicator of the overall growth potential of a community. While an educational planning group may not be prepared to make a sophisticated, detailed economic forecast, a general sense of the community's economic future is critical if plans are to be appropriate for a community with changing economic conditions. For this reason, it is necessary for the planning group to obtain any material that is available which can shed some light on the future of their district's economy. Once armed with this information, the profiling group is able to engage in futuring activities. That is, they are able to speculate, based on past and current trends, about their community, its growth and its future composition.

The impact of changing economic conditions on social and cultural phenomena is profound. That impact will vary from situation to situation--some communities may show an increase in population during an economic slowdown while others may experience a population decrease. Whichever the case, however, the ebb and flow of people coming into a community is a function of its prevailing economic conditions and employment opportunities. Thus, an analysis of economic information, particularly as it relates to land use and population, can be an important predictive tool for forecasting numbers and composition of future enrollments.

One major source of information for economic speculation is an economic forecast. These forecasts are conducted by many financial institutions and nearly all chambers of commerce. A page from an economic profile done by the San Jose, California Chamber of Commerce appears on the following page. Note that all of the information provided is shown as yearly increases or decreases, thus offering a profile upon which trends can be established by the user. While this information alone is insufficient to make sound speculations, it is a significant step in collecting relevant information for economic futuring.

Another means of collecting economic data is through the use of a commercial/industrial survey conducted by the district itself. In addition to assessing the planning group of a particular firm's plans for expansion or contraction, such a survey can provide information about how many workers are engaged in what types of work, thus providing a basis for determining the kinds of career education programs needed in the future. Figure 5 offers a sample Commercial/Industrial Data Collection Form. Like the social services data collection form, it can be used to establish a file for ongoing planning and decision making.

Obviously, the best of educational plans will ultimately fail if they cannot be financed. The planning group must, therefore, assess the community's ability and willingness to support the development of new programs and facilities. Part of this assessment can be accomplished through the analysis of community opinion. However, much can be learned by carefully studying a city, county or district's economic position--what is its bonding capacity, are special taxes available for public education? Following is a list of some of the more important pieces of information that can lead to an understanding of a community's ability to pay for the educational services it requires.

Figure 4

Population and Employment

POPULATION – CITIES AND UNINCORPORATED AREA

	1950 (1)	1960 (1)	1970 (1)	1974 (2)
Total, Santa Clara Co.	290,547	642,315	1,064,714	1,167,000
Campbell	NI	11,863	24,770	29,000
Cupertino	NI	3,664	18,216	23,600
Gilroy	4,951	7,348	12,665	15,650
Los Altos	NI	19,696	24,956	24,900
Los Altos Hills	NI	3,412	6,865	7,175
Los Gatos	4,907	9,036	23,735	24,650
Milpitas	NI	6,572	27,149	31,900
Monte Sereno	NI	1,506	3,089	3,270
Morgan Hill	1,627	3,151	6,485	8,100
Mountain View	6,563	30,889	51,092	59,900
Palo Alto	25,475	52,287	55,966	52,600
San Jose	95,280	204,196	445,779	527,500
Santa Clara	11,702	58,880	87,717	87,100
Saratoga	NI	14,861	27,110	29,650
Sunnyvale	9,829	52,898	95,408	105,200
Unincorporated	129,561	160,882	153,712	136,805

(1) U.S. Census
(2) California State Department of Finance

POPULATION

Year	Santa Clara County
1860	11,912
1870	26,246
1880	35,039
1890	48,005
1900	60,216
1910	83,539
1920	100,676
1930	145,118
1940	174,949
1950	290,547
1960	642,315
1970	1,064,714
1973 (1)	1,147,500
1974 (1)	1,167,000
1975 (2)	1,213,000
1980 (2)	1,342,800
1985 (2)	1,487,800
1990 (2)	1,614,300
1995 (2)	1,721,700
2000 (2)	1,804,900

In April 1970, we had
- 1,064,714 persons
- 9.2% or 98,013 were under 5 years old.
- 30.9% or 328,747 were 5-19 years old.
- 53.9% or 573,991 were 20-64 years old.
- 6.0% or 63,963 were 65 or more years old.

Of the total population
- 76.8% were white;
- 17.5% were white Spanish Surname or Language;
- 3% Oriental; 1.7% black and 1% other

Source: 1970 Census of Population
(1) California Dept. of Finance Estimates
(2) California Dept. of Finance Projection

ESTIMATED NONAGRICULTURAL WAGE AND SALARY WORKERS SAN JOSE METROPOLITAN AREA[1] ANNUAL AVERAGES

(Amounts in thousands)

	1970	1971	1972	1973
Industry Total	377.8	378.9	405.0	441.8
Mineral extraction	.1	.1	.1	.1
Construction	17.6	18.5	19.3	18.2
Manufacturing	123.5	117.4	124.5	145.4
Nondurable goods	25.5	24.6	24.6	25.4
Durable goods	98.0	92.8	99.9	120.0
Food and kindred products	14.1	13.8	13.3	13.7
Fruit and vegetable canning and preserving	8.8	8.8	8.4	8.9
Other food and kindred products	5.3	5.0	4.9	4.8
Paper and allied products	2.3	1.9	1.9	1.9
Printing and publishing	4.8	4.9	5.4	5.3
Chemicals and allied products	2.1	1.9	2.0	2.2
Rubber and plastic products	1.5	1.4	1.3	1.6
Other nondurable goods	.7	.7	.7	.7
Ordnance and accessories	20.7	19.0	18.8	18.7
Lumber and wood products	.6	.8	.7	.6
Furniture and fixtures	.3	.3	.4	.5
Stone, clay and glass products	2.7	2.7	2.8	2.8
Primary metal industries	.7	.7	.7	1.0
Fabricated metal products	3.0	3.0	3.0	3.3
Machinery, except electrical	16.0	16.4	17.4	21.5
Electrical equipment and supplies	46.6	43.2	48.9	63.4
Transportation equipment	4.5	3.9	4.2	4.5
Instruments and related products	2.3	2.3	2.5	3.1
Miscellaneous manufacturing industries	.6	.5	.5	.6
Transportation and utilities	17.0	17.5	18.2	18.7
Transportation	6.2	6.3	6.9	7.4
Communication, electric, gas and sanitary services	10.8	11.2	11.3	11.3
Trade	71.0	74.2	79.8	84.5
Wholesale	14.9	15.5	16.5	17.8
Retail	56.1	58.7	63.3	66.7
Finance, insurance, and real estate	13.1	14.0	15.8	17.1
Finance	6.3	6.6	7.2	7.8
Insurance and real estate	6.8	7.4	8.6	9.3
Services	75.5	75.6	82.2	90.5
Government	60.0	61.6	65.1	67.3
Federal	9.5	9.4	9.5	9.3
State and local	50.5	52.2	55.6	58.0
City	6.9	7.0	7.5	8.0
County	7.6	8.2	8.9	9.4
Other State and local	36.0	37.0	39.2	40.6

(1) Santa Clara County
Source: Employment Development Department, State of California

LABOR FORCE AND UNEMPLOYMENT

San Jose Metro Area Annual Averages

(In thousands)

	1970	1971	1972	1973
Labor Force	442	461	494	536
Employment	414	427	455	505
Unemployment	28	34	39	31
Unemployment Rate	6.3%	7.4%	7.9%	5.8%

Source: Employment Development Department, State of California

MANUFACTURING FIRMS & EMPLOYMENT SANTA CLARA COUNTY

Year	No. of Firms	Employment
1965	1,038	87,912
1966	1,098	104,331
1967	1,120	117,331
1968	1,197	126,400
1969	1,306	139,520
1970	1,370	127,219
1971	1,390	112,100
1972	1,458	124,500
1973	1,607	145,400

Source: California Employment Development Department.

UNION MEMBERS IN SANTA CLARA COUNTY

	Number of Locals July 1973
TOTAL	264
Manufacturing	70
Non Manufacturing	194

Date	Union Members
July 1969	105,400
July 1970	104,400
July 1971	101,200
July 1972	(1)
July 1973	107,200 (2)

(1) No survey taken in 1972
(2) Includes 35,400 manufacturing workers and 71,800 non-manufacturing workers.

Source: California Dept. of Industrial Relations Division of Labor Statistics and Research

Figure 5

COMMERCIAL/INDUSTRIAL DATA COLLECTION FORM

DATE August 12, 1974

NAME OF COMPANY Acme Rubber Co. (fictitious)

ADDRESS 1100 Santa Fe Drive, San Jose, CA

PHONE NUMBER 286-0770

	NAME	TITLE/POSITION
PERSONS TO CONTACT	Sebastian Dangerfield	President
	Kilgor Trout	General Manager
	Floyd Minana	Business Manager

TYPE OF BUSINESS/INDUSTRY Manufactures a variety of rubber products.

SIC 23454

EMPLOYEE CLASSIFICATIONS	NO. IN EACH CLASSIFICATION	MONTHLY WAGE PER CLASSIFICATION
Semi-Skilled	148	$103,500.00
Skilled	75	75,000.00
Semi-Professional	23	25,300.00
Professional	18	32,400.00
	TOTAL MONTHLY PAYROLL -	$236,200.00

COMPANY TRAINING PROGRAMS No formal training programs...some informal on-the-job training...very limited.

WORK/STUDY PROGRAMS Currently employs two part-time high school secretaries... are receptive to expanded work/study program...perhaps in machinists field.

EXPANSION PLANS While no formal plans for expansion currently on drawing board, rate of annual sales rises 10% each year suggesting consistent need for additional manpower.

Information Needed to Assess the Ability of the Community to Support Public Education

--city and county bonded indebtedness, capacity and amortization schedule

--school district bonded indebtedness, capacity and amortization schedule

--assessed valuation: city, county, school district

--tax rates: city, county, school district

--city and county expenditures for selected fiscal years

--city and county revenue for selected fiscal years

1) grants and gifts
2) administrative revenue
3) commercial revenue
4) taxes (income, property, sales)

--comparisons of city and county revenue and expenditures with other like entities

Community Concern Data

Community concern data--what people think, what they want and need--is a critical piece of the community profile snapshot. Opinion polls and surveys are not new to educational planning. Many schools and districts have effectively used questionnaires for defining needs and setting goals. Too often, however, only the opinions of parents with school-aged children are collected and analyzed. To be truly reflective of the total community, community concern data must be gathered from at least a sampling of all who live in the district or attendance area--parents and non-parents, singles and senior citizens--in short, everyone who resides in the area, pays taxes and expects something from their public schools.

Questions asked of the citizenry will range from educational program to facility design and location to methods of financing. Quite often questionnaire choices will let the district resident "strongly disagree," "disagree," "agree," or "strongly agree." Once the questionnaires are completed and tabulated, the community concern data takes the form of the percent who chose each of the responses.

Like the community resources data, community concern data can be collected by non-technical members of the planning group. Personal interviews can be conducted house to house or over the telephone by volunteer citizens or students. Questionnaires can be sent through the mail and followed up with telephone calls. Or, for a broader sampling, questionnaires can be published in the local newspaper.

Meetings of various service, fraternal and professional groups also provide a useful means of collecting community opinion. Questionnaires distributed and completed during these meetings offer special insight into the concerns of interest groups whose acceptance of new educational plans must be won. However, the danger in this approach is obvious. The planning group must avoid surveying only those groups of people who have traditionally made their voices heard.

One sure method of obtaining a true sampling of public opinion is by contracting a qualified consultant. Although the service may be costly, the end product is a scientifically produced cross-section of the total community's opinion about educational issues; and since public acceptance of new educational programs is critical to their financing and implementation, some districts may find the cost of professional surveying a bargain in the long term.

Land Use Data

Land use data--data about how land is being used and about how it can be used--is perhaps the most direct indicator of what the future holds for a school district or neighborhood. Careful analysis of land use data can be an invaluable tool in projecting enrollment increases and decreases, in predicting changes in the character and composition of a community and, ultimately, in addressing a variety of issues that can range from site location to curriculum to school transportation systems.

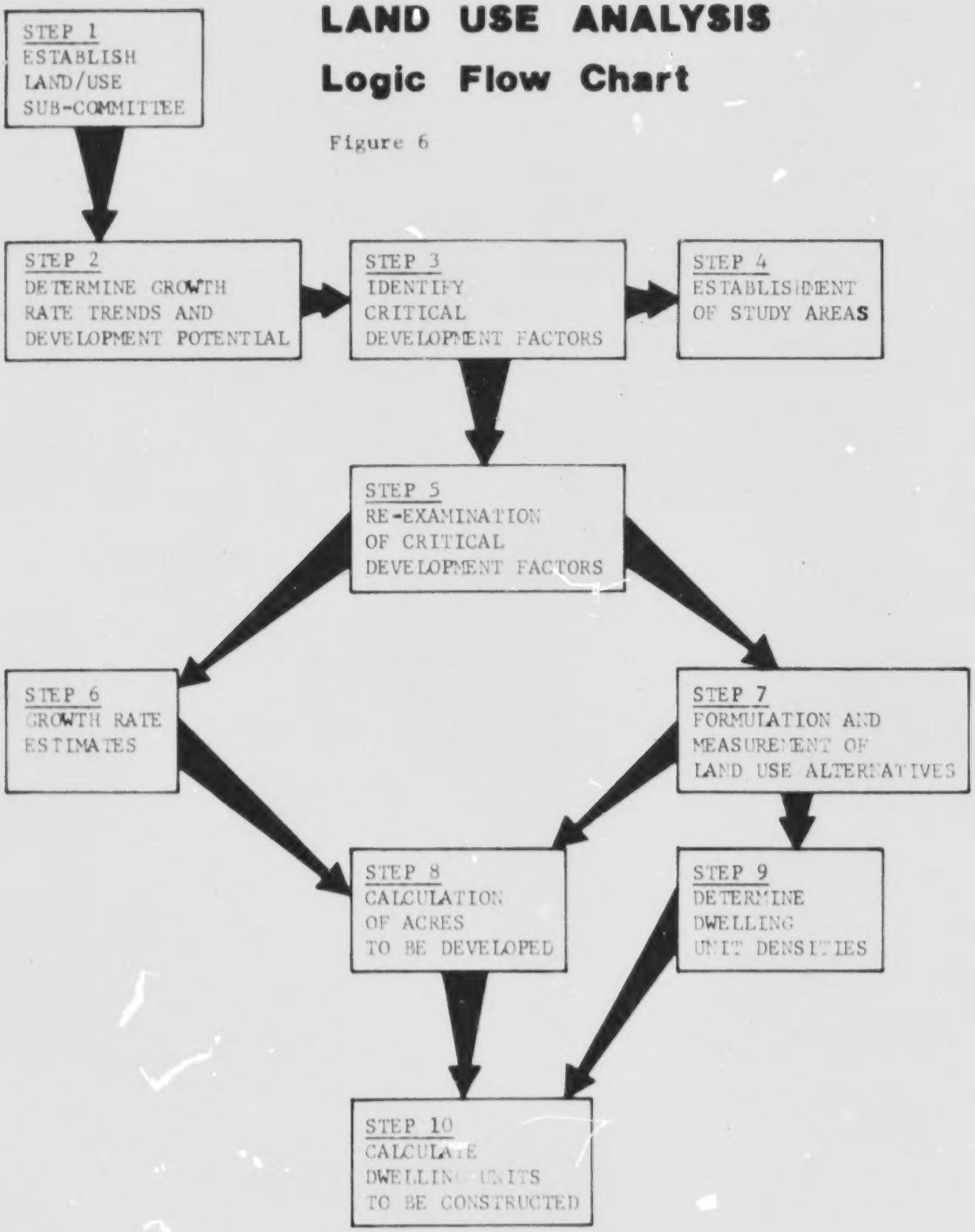
On the pages that follow, two methods of collecting and analyzing educationally relevant land use data are abstracted. The first, designed to produce housing information for ENSIM, an enrollment simulation model, was developed and tested in a small but rapidly growing school district in the southern part of Santa Clara County, California. The second method, also created for a Santa Clara County school district, was developed for use in monitoring housing construction in an area nearing saturation. While both procedures analyze much of the same data--number of undeveloped acres, special characteristics of the district, local dwelling unit densities--each was specifically designed to meet the information needs of a particular planning effort.

The ENSIM Land Use Analysis: The ENSIM Land Use Analysis is comprised of ten steps. As shown on the logic flow chart on the following page, the procedure begins with the establishment of a land use subcommittee and ends with the calculation of the number of dwelling units to be constructed in the district, by five year period, by type of dwelling unit. Once the special land use subcommittee has been established, a broad data gathering effort is undertaken by both the technical staff and the district residents who comprise the subcommittee. In this, the second step of the analysis, special characteristics of the districts are studied as are the district's growth history and current building activity.

In step three, several "critical development factors," deemed by the subcommittee as pivotal in the district's rate and type of growth, are

ENSIM
LAND USE ANALYSIS
Logic Flow Chart

Figure 6



selected from the vast array of data collected in step two. A sampling of possible critical development factors, many of which will be localized in their impact and will not affect the total district, follows:

--sewerage lines extension
--annexation of county territory into city jurisdiction
--improved water supply
--new transportation routes
--new industry
--change in allowable lot size due to new zoning regulations
--major proposed subdivisions.

After the critical development factors have been entered on a large-scale map of the district, step four divides the district into smaller, more manageable units called study areas. The study areas, which should follow as closely as possible clearly visible features of the man-made or natural environment, are drawn to be homogeneous in regard to their development potential (i.e., the important factors that will influence their type and rate of growth). Thus, changes in localized critical development factors which alter projections in one or a few study areas will not invalidate the entire projection effort.

Once the study areas have been established, each of the "critical development factors" identified in step three are described in detail and cataloged according to the study area, or areas, it is expected to affect. Following this re-examination process in step five, staff and subcommittee members estimate future development by making subjective appraisals of the critical development factors based on their knowledge of the local area. The estimates which result from step six must be made in the form of the percent of vacant land that will be developed in each study area at five year intervals (i.e., either two or three estimates per study area depending on the length of the projection).

In step seven, land use alternatives must be formulated which take into account specific uses of land as they have been defined by differing development policies. These may include existing zonings, proposed general plans or a combination of both. In this way, the ENSIM analysis makes allowance for a variety of political eventualities. In the event that any specific policy alternative be adopted in the future, a projection based on that particular land use alternative exists.

After these alternatives have been entered on maps of the district, it is necessary to determine the size of those portions, in acres, which allow residential construction. Figure 7 offers a hypothetical study area which has been divided into development categories under a general plan alternative.

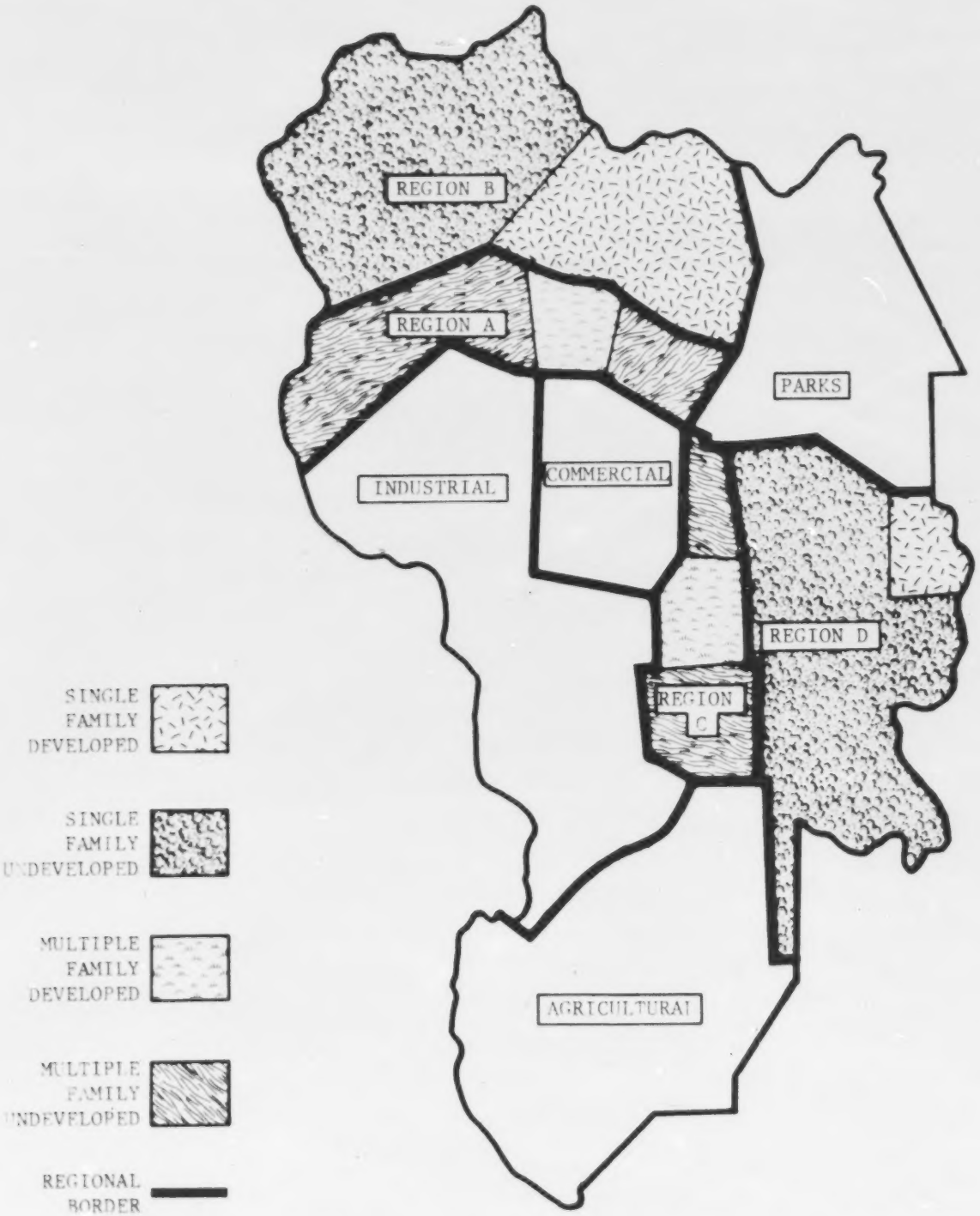
As stated, acreage of residentially zoned regions must first be measured or calculated from records:

Region A (multiple family) . . . . . 50 acres
Region B (single family) . . . . . 300 acres
Region C (multiple family) . . . . . 50 acres
Region D (single family) . . . . . 250 acres

Figure 7

STUDY AREA X

(ALTERNATIVE A)



Next, it is necessary to estimate the amount of acreage already developed in each region, and, hence, unavailable for future development:

Region A (multiple family) . . . . . 20% developed
Region B (single family) . . . . . 50% developed
Region C (multiple family) . . . . . 20% developed
Region D (single family) . . . . . 5% developed

Finally, the percentage of land allocated to streets, utilities, etc., must be subtracted from the vacant land available for residential development. Such percentages are best learned by consulting with appropriate local jurisdictions.

In step eight, district acres to be developed are calculated by combining the growth rates generated in step six and the land use alternatives, in acres, generated in step seven. Thus, sets of development possibilities for each land use alternative (in acres to be developed) are produced by study area, by zoning, by five year interval.

Step nine is merely the determination of dwelling unit densities. That is, the number of dwelling units per acre allowed under each of the land use policies (land use alternatives). Again, the subcommittee needs to consult with the appropriate governmental agency for this information.

The final step, step ten, calculates the number of new dwelling units to be built by type, by study area, by five year period. This calculation is accomplished by multiplying the dwelling unit density of each land use policy by the number of acres that will be developed under each respective policy. Later, these data are used to project future enrollment potential from each study area.

The Land Use Monitoring System: Unlike the ENSIM analysis, the Land Use Monitoring System was developed for a maturing district facing decreasing enrollments and has as its major objective short-term, rather than long-term, enrollment predictions. And, unlike ENSIM, the Land Use Monitoring System was created to operate on an ongoing basis, providing continual information to the LEA administrator rather than long-term projections to the master planning group.

At the heart of the Land Use Monitoring System is the vacant parcel record (VPR), a Key Sort ™ card that captures 39 data elements for every vacant parcel of land in the district. Although completion of these cards is a time-consuming task, it need be done only during the initial stages of the operation. Once the basic data is captured, the VPR card becomes a permanent record for monitoring the development of vacant parcels over an extended period.

As events occur which indicate that a vacant parcel is nearing development, data is systematically entered on the VPR. As listed under "Development Status" on the VPR sample on the following page, the events leading to a parcel's full development are typically:

1) annexation requested
2) annexation approved

Land Use Inventory
Vacant Parcel Record

CUPERTINO UNION SCHOOL DISTRICT

Jurisdiction: Cupertino | San Jose | Santa Clara | Saratoga | Sunnyvale | Los Altos | S.C. County

File Number

Elem | **Inter** | **High** 22

School Attendance Area

Address/Location Description

Add:

Location Desc:

Remarks

Date of Last Entry Initial

Census Tract	
X, Y Coordinates	
Grid Codes	

Development Status	Date
Annexation Requested	
Annexation Approved	
Plan Dev./Rezoning Requested	
Plan Dev./Rezoning Approved	
Tentative Tract Map Submitted	
Tentative Tract Map Approved	
Final Tract Map Approved	
Building Permit Issued	
Ground Broken	
Occupancy/Final Inspection	
Parcel Fully Developed	
Current Zoning	R-1
	R-2
	R-3
	C
	I
Occupancy Level	
Estimated Year of Development	6 mos.
Base Date	1 year
	2 year
	3 year
	4 year

Parcel Size: Less Than 1 Acre | 1-3 Acres | 3-5 Acres | 5-15 Acres | 15+ Acres

Zoning Conversion Potential: Low | Medium | High

Tract Number	
Tract Name	
Developer	
Developer Phone	
Price Range	
Rental Range	
Avg. No. Bedrooms	
Resident Policy	Young Adult
	Family
	Senior Citizen
	Open to Any
Dwelling Type	Single Family
	Townhouse/ Condominium
	Duplex
	Fourplex
	Apt. 5-10 Units
	Apt. 10-40 Units
	Apt 40+ Units
Assessor's Parcel No.	
Owner Name	
Owner Address	
Gross Acres	
Net Acres	
Projected No. Units	
Density Range	
Yield Factor Dist.	
Yield Factor Dev.	

3) plan development/rezoning requested
4) plan development/rezoning approved
5) tentative tract map submitted
6) tentative tract map approved
7) final tract map approved
8) building permit issued
9) ground broken
10) occupancy/final inspection
11) parcel fully developed.

Through the use of the key-sort card technique, vacant parcel files can be sorted by any data element without the use of expensive computer equipment. For example, with two key-sorts, by residential-1 and attendance area, a planner can learn in a few minutes the number of single family residences that are predicted to impact a district school or attendance area. The technique can similarly aggregate parcels by any of the 39 data elements recorded on the cards.

The key to the Land Use Monitoring System is a clear, open line of communication between the LEA and the local planning department, planning commission and city council. Since these governmental bodies control the direction of land use, they are best suited to help the school district stay abreast of development in the area. Information concerning the development status of vacant parcels is passed from the governmental agencies through the minutes of meetings, through copies of tentative tract maps and through verbal communication between the LEA and the agencies' staffs.

It must be noted that the Land Use Monitoring System is only viable in districts where the number of vacant parcels is relatively small. Districts with much undeveloped land may find the semi-automated system unwieldy and may wish to convert it to a computerized process.

The two land use analysis techniques abstracted here were created to predict the rate and nature of residential growth on land previously undeveloped. Growth, however, can occur as a function of urban redevelopment. Predicting land "reuse" requires the collection and analysis of information that is very area-specific--that is, information about specific urban renewal plans. A variety of governmental agencies can provide this information, and direct communication with these agencies is the most efficient means of assessing the impact of land reuse on urban school districts.

The ENSIM analysis and the Land Use Monitoring System are but two methods of collecting and analyzing data about how land is being used and how it can be used. Both techniques were developed for areas with special characteristics and needs. Both, however, have as their major objective the prediction of residential development. Land is the basic resource of community growth. As changes in land use occur, educational institutions are directly affected. If school planners are to effectively plan for the educational needs of a community, that community's land uses and reuses must be continuously studied and monitored.

Specific data elements needed for a land use analysis will, of course, depend on the size and physical nature of the district under study and on the techniques chosen by the planning group. There are, however, some elements whose importance makes them critical to most land use studies. A listing of some of those data elements and their sources follows:

- --current zoning (by parcel or study area)
- --gross acres of undeveloped land by zoning type
- --net acres of undeveloped land by zoning type
- --projected number of dwelling units by parcel or study area (predicted on zoning density allowance)
- --estimated year of development
- --number and type of new dwelling units projected per year for planning time frame; i.e., 5, 10, 15 years
- --number of bedrooms per dwelling unit
- --parcel
  - --number assigned by assessor
  - --address-location description
  - --developer's name
  - --owner's name
  - --price range
  - --rental range
- --critical development factors such as sewerage line extension, new roads, new industry, flood plain work, annexation
- --yearly development estimate by study area
- --survey of proposed subdivisions under consideration
- --undeveloped acreage by school attendance area
- --breakdown of projected yearly dwelling units by attendance area
- --proposed general zoning plans which could change density allowance
- --urban redevelopment master plans
- --survey of requested and issued building permits

Sources:

- --city planning department
- --county planning department
- --state board of allocations
- --city housing authority
- --county housing authority
- --redevelopment agency
- --urban renewal agency
- --department of public works
- --city planning commission
- --city council
- --federal topographic office
- --federal housing commission
- --local realtors' association
- --mortgage companies
- --land developers
- --state department of highways
- --bridge authorities
- --public transportation authorities
- --conservation groups
- --planning schools (public and private colleges and universities)

Population Data

Population data provides the planning group with perhaps the largest slice of the community profile snapshot. It tells the group how many people live in the community, where they live, and who they are. And, like the land use data, population data can be effectively displayed on a series of maps, map overlays or even CRT computer terminals.

The most readily available source of population data is the 1970 U.S. Census. The U.S. Census provides baseline data on the socio-economic characteristics of the population as well as the occupancy, utilization and financial characteristics of the community's housing. From the 41 population questions and thirty housing questions asked in the census questionnaire, a multitude of valuable community characteristics can be perceived. Some with direct relevance to educational planning are listed below.

Population:

--relationship to head of household
--race
--age (month and year)
--sex
--marital status
--state or county of birth
--years of school completed
--number of children ever born
--occupation, industry and class of worker
--income last year
--year moved into this house
--school or college enrollment (public or private)
--place of work
--means of transportation to work
--Mexican or Spanish origin or descent

Housing:

--number of units at this address
--number of rooms
--tenure (own or rent)
--value
--contract rent
--year structure built
--number of units in structure and whether a trailer
--number of bedrooms

Census data can be obtained on a number of geographic levels, the most useful of which is the census tract. Census tracts are small, relatively permanent areas into which large cities and adjacent areas are divided. Below the census tract level, data are aggregated at the city block, block face and block group level. These lower levels are not published, however, and because they are in the form of magnetic tapes, they are of value to only those school districts with computer capability.

Because census tracts are not drawn to be coterminous with school district or attendance boundary lines, the problem of matching census data on the tract level with school areas has been significant. Currently, however, the National Center for Educational Statistics, U.S. Office of Education, offers several products which provide socio-economic data at the school district level. These data are available both on computer tapes and microfiche files. While there is a nominal charge for these products, their use can greatly enhance the value of census data in educational planning. Moreover, the U.S. Census Bureau has developed a means of identifying census data on the block face and street segment level. This geocoding system is comprised of three subsystems which, when used together, offer sophisticated ways of aggregating census data at smaller, more valuable levels. The subsystems are:

(1) An address matching system which matches locally generated addresses to the addresses of a geographic base file and assigns geographic codes to the local records for mapping and display purposes.

(2) The DIME Geocoding System (Dual Independent Map Encoding), a geographic base file which defines a street network in terms of street segments, nodes and enclosed areas. The DIME System also includes non-street features such as railroad tracks, rivers, municipal boundaries, etc.

(3) A computer mapping system (GRIDS), a package of computer mapping programs and instructions which produce computer generated maps of U.S. Census data on local geocoded data. Figure 9 is an example of data shown on a map using the GRIDS technique.

These geocoding techniques hold significant potential for school planners/administrators in areas such as small area enrollment projections, attendance boundary adjustment and bus routing and scheduling.

At the school attendance boundary level, however, there is still need to manually match census tract data. A school attendance area might, for example, be made up of a combination of complete and partial tracts. For census data to be useful in this instance, the percentage of the tract which lies in the boundary must be estimated and, thereafter, that percentage must be applied to all data elements used in the profiling effort. Using a large scale map of the area under study, an analysis of the tract's housing units that lie in the attendance area must be done manually. Figure 10 offers an example of a school attendance area comprised of four complete tracts and one partial tract. Note that in computing the total number of children under five years of age who live in the attendance area, only 63% of the 147 children in tract 5061.02 are summed into the total.

The best possible population data for educational planning is that which is obtained from a current district or attendance area census. Eliminating the need for computerized or manual data/area matching, a special census can be contracted or done by volunteer enumeraters and coordinated by a part-time demographer. Whichever way it is accomplished, a special

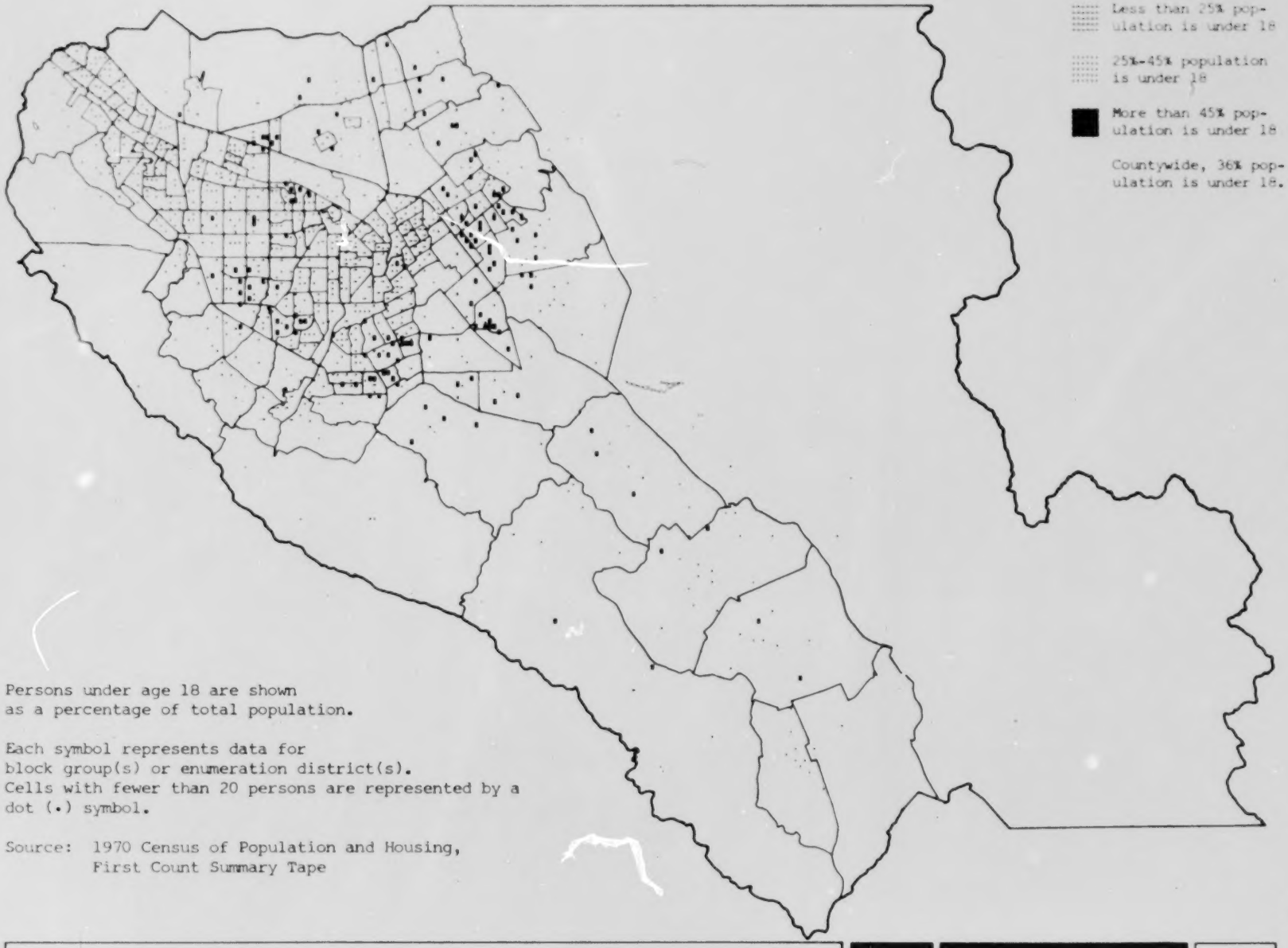

Less than 25% population is under 18
25%-45% population is under 18
More than 45% population is under 18
Countywide, 36% population is under 18.

Figure 9

Persons under age 18 are shown as a percentage of total population.

Each symbol represents data for block group(s) or enumeration district(s). Cells with fewer than 20 persons are represented by a dot (.) symbol.

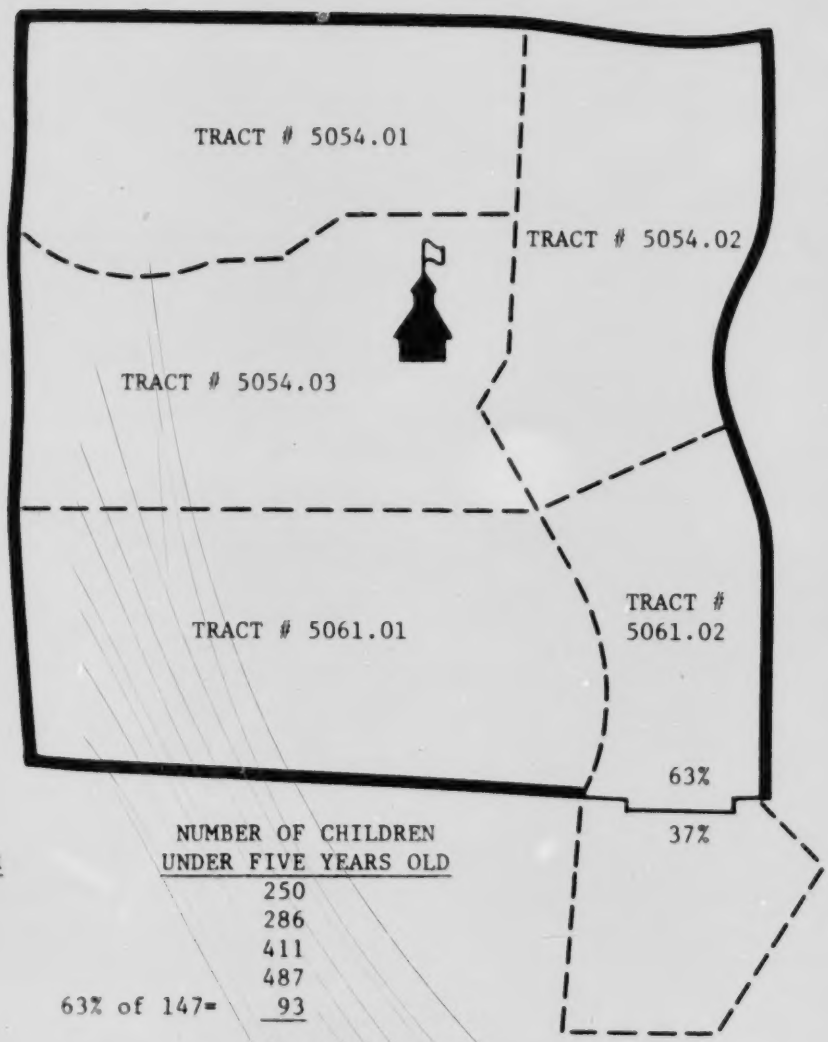
Source: 1970 Census of Population and Housing, First Count Summary Tape

MAP 1: PERSONS UNDER 18

PROFILE 70

Figure 10

ATTENDANCE AREA X



TRACT NUMBER		NUMBER OF CHILDREN UNDER FIVE YEARS OLD
5054.01		250
5054.02		286
5054.03		411
5061.01		487
5061.02	63% of 147=	93

TOTAL NUMBER OF CHILDREN UNDER FIVE LIVING IN ATTENDANCE AREA X 1527

census offers an excellent opportunity for detecting changes in the population when compared to earlier census as well as an opportunity for the planning group to ask any area-specific questions they feel would be useful in the profiling effort.

In addition to the information available through the U.S. Census or special census, there is a wealth of population data held by various public agencies--data about the population's physical and mental health, about its delinquency and crime problems, about its public assistance needs and its leadership.

Figure 11 is a sample page from Profile '70, a socio-economic profile of Santa Clara County, California. This project, done by the Social Planning Council of Santa Clara County and with the assistance of several other governmental agencies, represents a successful effort at looking beyond census data for a more complete view of the community. The profile, done on a census tract level and including many of the U.S. Census elements, contains health, juvenile and criminal justice, community participation, land use and public assistance data. By including information from both 1966 and 1970, the profile shows the percentage of change over four years and ranks each census tract for each data item as favorable or unfavorable in relation to the entire community. Throughout the United States, similar profiles have been conducted in varying depth. Where the profiles are available, they will contribute significantly to the planning effort; where they are not, it is hoped that the Profile '70 sample can serve as a guide in creating this important planning tool.

Like land use data, population data are most useful to the planning group when displayed in a meaningful, concise way. In the figures that follow, a variety of data, relevant to educational planning, are presented using a number of display techniques. Several of the display examples presented below were taken from an actual profile of Sunnyvale School District, Sunnyvale, California.

Figure 12 illustrates the use of maps in displaying information about educational attainment in a school district. The map is useful in determining the amount and nature of adult education needed in the district and, with the use of school attendance boundary overlays (Figures 13 and 14), the planning group can also establish which schools are best able to accommodate such a program. Further information helpful in designing an adult education program is displayed in Figure 15, an occupational distribution of the population.

Figure 16, depicting the percentage of children under five years of age who attend nursery school, similarly displays census data at the tract level. Again, using attendance boundary map overlays, Figure 16 serves to alert the planning group to the need for and the appropriate location of a preschool program. Other helpful census data might include the number of families with female heads with related children under five years of age.

Figure 11

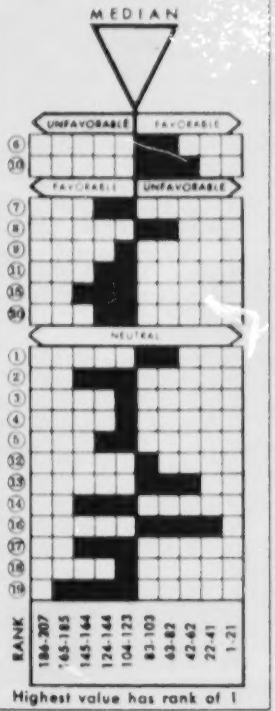
CENSUS TRACT 5062.01

PLEASE NOTE: On April 20, 1973 the U.S. Bureau of the Census released revised population and housing unit counts for Santa Clara Co. No new detailed characteristics have been released. All 1970 Census data below are based on previously released material.

Revised Total Population — 8,917
Revised Total Housing Units — 2,682

		1970		1966		Change 1966-70		Rank	
		#	%	#	%	#	%	1966	1970
POPULATION	Total	7858	100.0	6073	100.0	1785	29.4	42	25
	Household	7825	99.6	6058	99.8	1767	29.2	41	23
	Male	3885	49.4	2969	48.9	916	30.9	135	86.5
	Female	3973	50.6	3104	51.1	869	28.0	73	122
1	Age: Under 5	738	9.4	743	12.2	-5	-0.7	44	82
	5-17	2157	27.4	1600	29.6	557	34.8	104	106.5
	18-44	3460	44.0	2582	42.5	878	34.0	42	36.5
	45-64	1260	16.0	778	12.8	482	62.0	148	136
2	65 & Over	243	3.1	170	2.8	73	42.9	141.5	150
3	Median (In Years)	25.6	N.A.	24.7	N.A.	1.1	4.5	106	109
	Race/Ethnic: White Non-SSL	6955	88.5	White SSL (see Notes) differs from M/A (Mexican American) as used in 1966. The 1970 racial category "Oriental" was not enumerated separately in 1966. Thus Race/Ethnic data for 1966 are not given here but can be obtained at the Santa Clara Co. Planning Dept.					51.5
	White SSL	629	8.0						151.5
	Oriental	189	2.4						108
	Black	25	0.3						148
	Other	60	0.8						102.5
	Marital Status (Population 14+): Married	5886	70.2						32
	Single	2152	20.8						174.5
	Other: Widowed, Divorced, Separated	500	9.0						138.5
	Children Under 5 per 1000 Women 15-44	370	N.A.	511	N.A.	-141	-27.6	72	111
HOUSEHOLD CHARACTERISTICS	Households (HH): Total	2416	100.0	1644	100.0	772	47.0	56	22
	White SSL	165	6.8						103.5
4	Average Household Size: Total	3.24	N.A.	3.68	N.A.	-0.44	-12.0	77.5	106.5
	White SSL	3.70	N.A.						85
	One Person Households	237	9.8	55	3.3	182	330.9	174	129.5
5	Households with Woman Head: Total	317	13.1	144	8.7	173	120.1	150	136
	White SSL	42	25.5						13
INCOME, EDUCATION & EMPLOYMENT	6 Median Household Income: Total	$12,293	N.A.	$9,570	N.A.	$2,723	28.5	60	80
	White SSL	$12,365	N.A.						21
7	HH with Income Below Poverty Level: Total	130	5.4						137
	White SSL	11	6.5						96.5
8	Persons 65+ with Income Below Poverty Level	40	16.4						66.5
	Civilian Labor Force	3426	43.6	2083	34.3	1343	64.5	82.5	69
9	Unemployed Persons: Total	170	5.0	37	1.3	143	529.6	178	114
	Women	81	6.5	9	1.5	72	800.0	169	102.5
	Employed Women (% based on Total Empl.)	1154	35.4	585	28.5	569	97.3	130	112.5
10	Median Yrs. School Compl. (Pop. 25+): Total	12.9	N.A.	12.9	N.A.	0.0	0.0	66.5	54
	White SSL	12.5	N.A.						23.5
11	High School Drop-Out Indicator (See Notes)	N.A.	5.2						140.5
HOUSING	Total Housing Units (HU)	2622	100.0	1763	100.0	859	48.7	55	18
	Occupied Housing Units: Total	2416	92.1	1644	93.3	772	47.0	113.5	190.5
	Owner	1386	57.4	1192	72.5	194	16.3	92	125
12	Renter	1030	42.6	452	27.5	578	127.9	116	83
	Vacant Housing Units	206	7.9	119	6.8	87	73.1	94	18.5
	Average Household Size: Owner Occupied	3.78	N.A.	3.93	N.A.	-0.15	-3.8	72	68.5
	Renter Occupied	2.51	N.A.	3.08	N.A.	-0.57	-18.5	100	133
	Value of Owner Occupied HU: Median	$29,200	N.A.						66.5
	Valued less than $15,000	0	0.0						203.5
	Valued more than $35,000	182	14.3						88.5
13	Contract Rent for Renter Occupied HU: Median	$175	N.A.						45
	Monthly rent less than $100	8	0.8						204
	Monthly rent more than $200	229	22.3						67
	HU's in Structure: 1 (Single Family)	1431	54.6	1270	72.0	161	12.7	120	159
	2+ (Multiple Family)	1191	45.4	493	28.0	698	141.6	79	42
	Mobile Homes	0	0.0	0	0.0	0	0.0	140	170
	No. of Years in HU: Less than 2 Yrs.	1208	50.0						58
14	More than 20 Yrs.	22	0.9						151
	HU's Built Before 1950	52	2.0						171.5
	HU's Built After 1965	1023	39.0						27
15	Crowding: HU's with 1.01 or more PPR: Total	75	3.1						152
	White SSL	20	12.0						95.5
16	Rent-to-Income Indicator (See Notes)	N.A.	83.1						39
17	Households With No Cars	53	2.2						156.5
	Transp. to Work (Workers): Private Auto	3061	90.7						100
	Public Transportation	54	1.6						121

PROFILE 1970



Highest value has rank of 1

NOTES

AFDC = Aid to Families with Dependent Children
Empl. = Employed
Pop. = Population
PPR = Persons Per Room
Transp. = Transportation
White SSL = White persons of Spanish Surname or Spanish Language

N.A. = Non-Applicable
UNAV. = Unavailable
= Data Unavailable for 1966

High School Drop-Out Indicator = % of persons aged 16-21 not high school graduates and not enrolled in school.
Rent-to-Income Indicator = % of Households with incomes under $10,000 that pay 25% or more of income for gross rent.

Full definitions and the bases for percentages are in Appendix A.

BOUNDARIES

Stevens Creek Boulevard
Saratoga Ave.
Williams Road - Moorpark Ave.
Lawrence Expressway

HEALTH/VITAL STATISTICS (1970)

Births	58	16 Fertility Rate	69.1
Deaths	22	Rank	115
Accidental	1	19 Age-Adjusted Death Rate	3.66
Cardio-Vascular	7	Rank	177
Admissions to County Mental Health Facilities			121

JUVENILE/CRIMINAL JUSTICE

Juvenile Probation Referrals (6/70-6/71)		83
(a) % For Violations of Criminal Statutes		68.9
20 (b) As % Population 10-17		5.6
Rank		125
Adult Arrests: Total (3/72-9/72)		77
Dismissed		4
Convicted: Total		14
Felony		0
Misdemeanor		14
Not Reported		0

COMMUNITY PARTICIPATION

Registered Voters (November, 1970) 3,344

LAND USE (1967)

	ACRES	%
Gross Acreage	771	100.0
Residential	229	31.3
Commercial/Industrial	34	4.6
Recreational	13	1.7
Agricultural	188	25.8
Other	267	36.6

PUBLIC ASSISTANCE (January 1973)

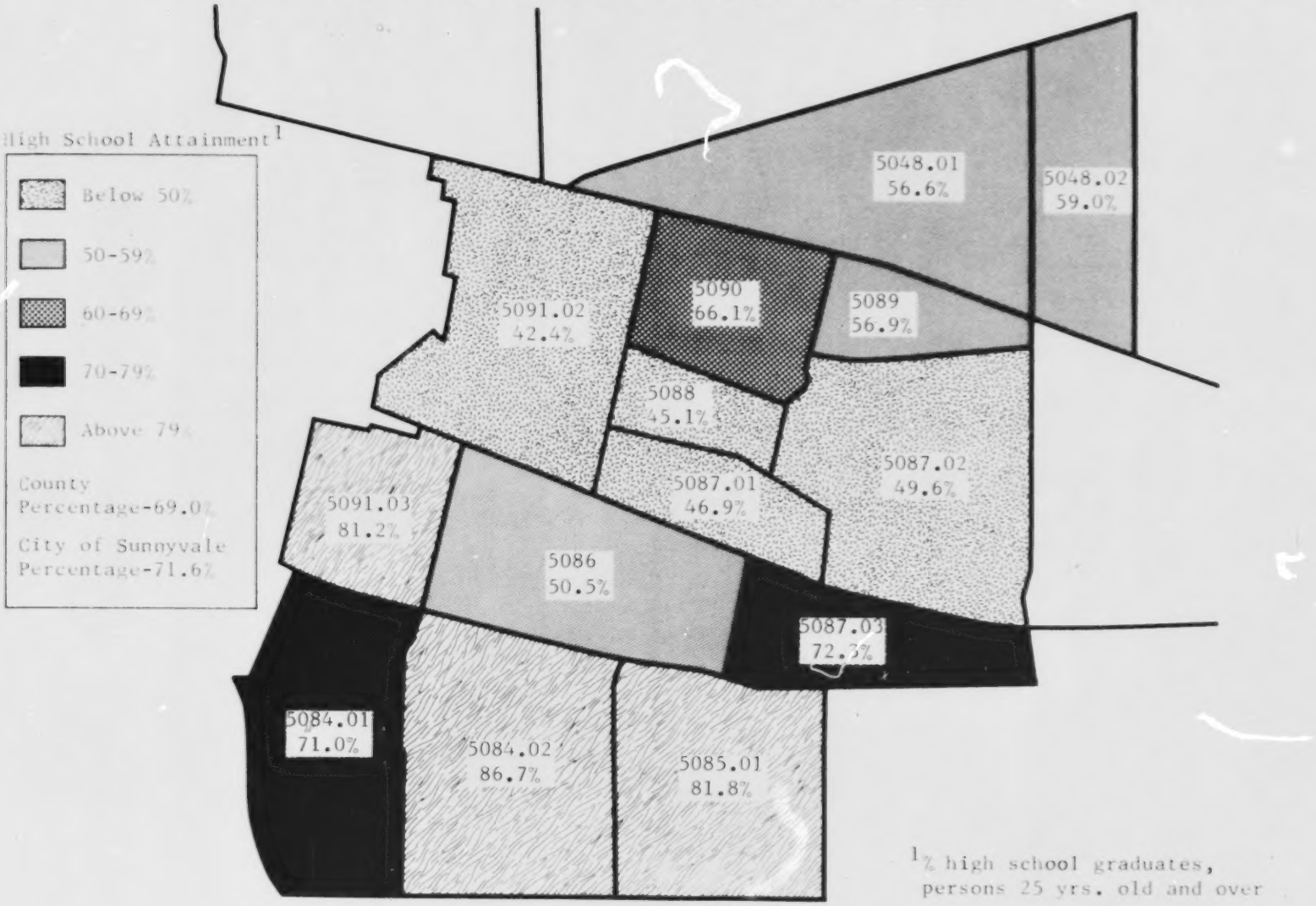
	Cases	Persons
Total (Cash Grant)	198	479
Old Age Assistance (OAS)	35	42
Aid to Blind & Disabled (ATB + ATD)	25	31
AFDC	121	339
Total Certified for Medi-Cal	215	457
Certified for Medi-Cal only	21	28
Total Certified for Food Stamps	152	419
Certified for Food Stamps Only	35	115

MISCELLANEOUS

Federally Assisted Housing Units: (Nov. 1972)	Total	176
	Section 235, 236	176
	Section 23 (Leased)	0

Figure 12

1970 U.S. CENSUS EXTRACTS
HIGH SCHOOL ATTAINMENT - SUNNYVALE SCHOOL DISTRICT



[1]% high school graduates, persons 25 yrs. old and over

Figure 13

ATTENDANCE BOUNDARIES OF ELEMENTARY SCHOOLS
SUNNYVALE SCHOOL DISTRICT

Figure 14

ATTENDANCE BOUNDARIES OF INTERMEDIATE SCHOOLS
SUNNYVALE SCHOOL DISTRICT

FIGURE 15

PERCENTAGE DISTRIBUTION OF POPULATION

BY OCCUPATIONAL CLASSIFICATION (1966, 70, 74)

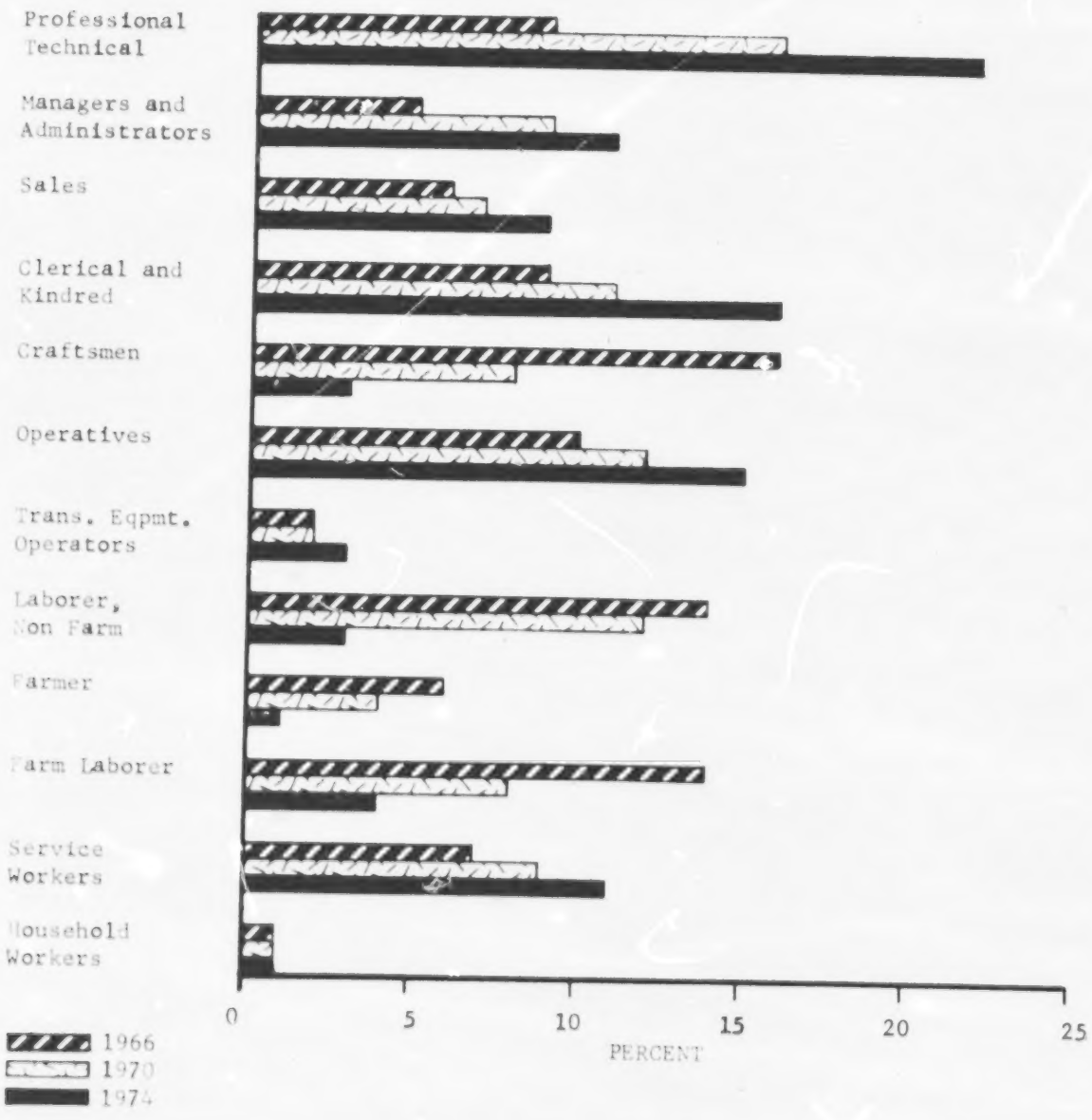
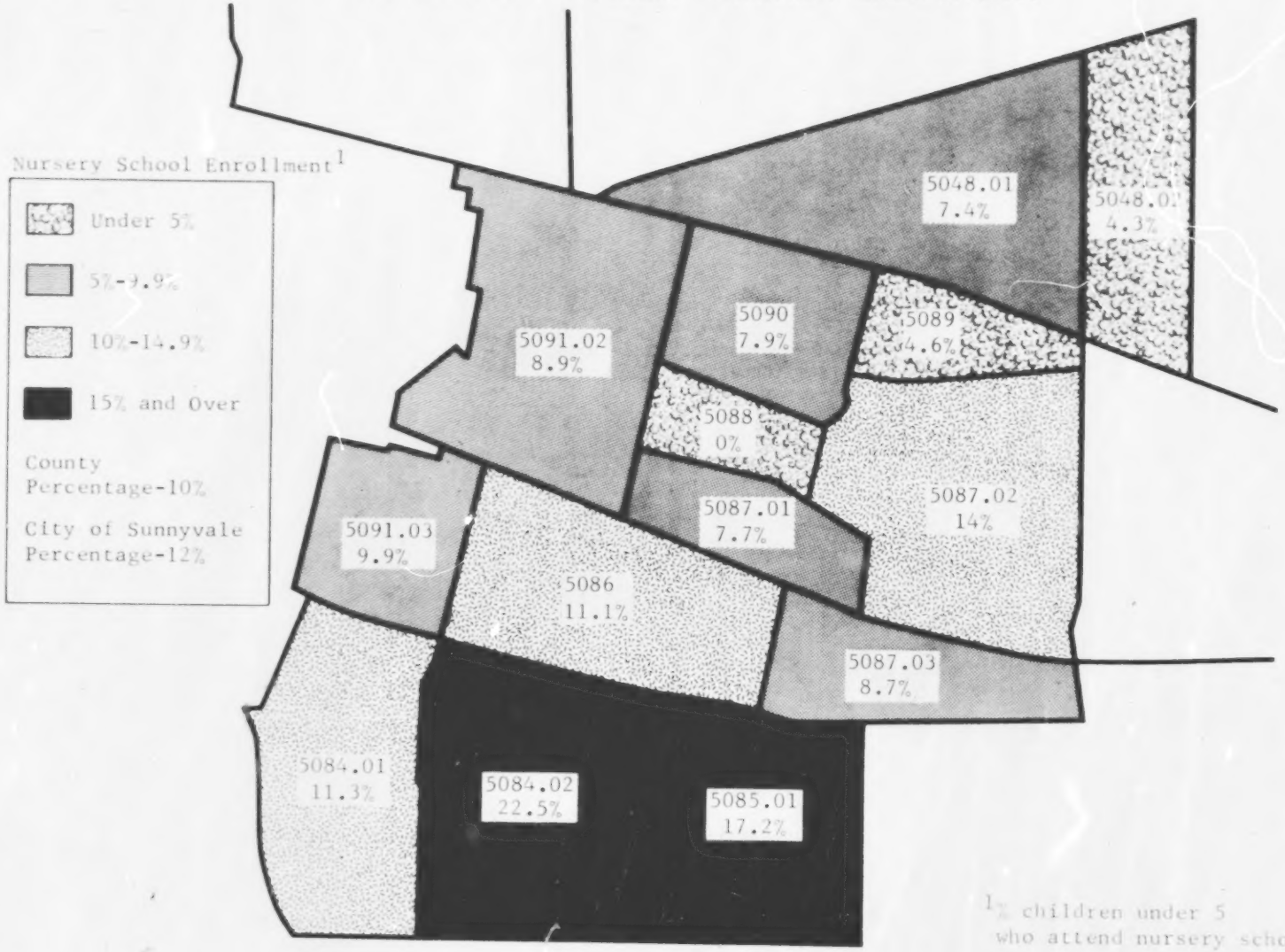


Figure 16

1970 U.S. CENSUS EXTRACTS
NURSERY SCHOOL ENROLLMENT - SUNNYVALE SCHOOL DISTRICT



[1]% children under 5 who attend nursery school

Enrollment projections, either in the short or long term, are of central importance in most master planning efforts. Figures 17 and 18 demonstrate two methods of displaying census data that relate to the age composition of an intermediate school attendance area. Note that city and county figures are also provided, thus allowing the planning group to view the attendance area as it relates to the larger geographic areas. Figure 18, population change by age group, is of particular value in viewing trends in population composition.

Housing data are essential in arriving at sound enrollment projections. Figure 19 offers an example of displaying housing data in a Sunnyvale elementary school attendance area. At the top of the figure is an extract from Profile '70 which details the housing data elements of tract 5048.01, the census tract comprising most of the attendance area. Below the extract are two pie diagrams showing the percentages of housing types for the years 1966 and 1970. As shown in the diagram, single family units comprised 91% of the available housing in 1966, and only 59.5% of the housing in 1970. This reduction was the result of a dramatic increase (21 units in 1966, 586 units in 1970) in the number of mobile homes in the census tract. The new mobile home development, constructed exclusively for senior citizens, caused a 600% increase in the number of persons 65 and over in tract 5048.01 between 1966 and 1970. During this same four year period, the number of children under five in the census tract decreased 16.3%. The implications of this shift in housing composition and resulting change in population were twofold: first, the school administrators would have to recognize the potential for a declining enrollment and need to plan to meet that eventuality; and second, they would have to develop plans for delivering services to the growing over-65 population.

Census display techniques are often an invaluable means of validating with hard data what a planning group or district administrator already knows intuitively. For example, a superintendent may "know" that in his district there is a strong correlation between minority concentrations and low-cost older housing. But "knowing" intuitively is not enough, particularly at a time when mandated integration requires tough and often unpopular decisions. Figures 20 and 21 show one method of statistically demonstrating what was long known in the Sunnyvale School District. Figure 20 shows the ethnic distribution of the district at the census tract level. Note the band of relatively high percentages of minority population that runs through the center of the district. Figure 21 uses the same district map to show the age and value of the houses in each of the census tracts. Not surprisingly, those tracts with the highest concentrations of minority population are in the older section of the district and have the lowest priced housing. Conversely, in the newer, growing areas of the district to the north and south, the minority population is the smallest--not a startling revelation perhaps, but a graphic substantiation of what decision makers thought but had no way of proving.

Still another problem that a planning group or administrator may "feel" is a lack of representation from the entire community. Validating that lack can be accomplished through the use of "social mapping" as shown in

Figure 17

AGE DISTRIBUTION BY CENSUS TRACT
BENNER INTERMEDIATE SCHOOL

TRACT NUMBER	UNDER 5 yrs.	5-17 yrs.	18-44 yrs.	45-64 yrs.	OVER 65 yrs.
5086	7.8%	20.4%	34.5%	26.5%	10.8%
5087.01	11.0%	20.5%	36.7%	23.2%	8.6%
5087.02	12.7%	19.6%	43.6%	18.2%	6.0%
5088	9.5%	20.7%	42.1%	20.8%	6.8%
5091.02	11.5%	29.8%	38.2%	15.6%	5.0%
5091.03	8.9%	13.6%	59.5%	14.6%	3.4%
CITY OF SUNNYVALE	9.3%	26.6%	41.8%	17.8%	4.5%
COUNTY OF SANTA CLARA	9.2%	27.4%	40.2%	17.2%	6.0%

Figure 18

POPULATION CHANGE BY AGE GROUP
1970 and 1966 U.S. CENSUS EXTRACTS
BENNER INTERMEDIATE SCHOOL, CITY AND COUNTY

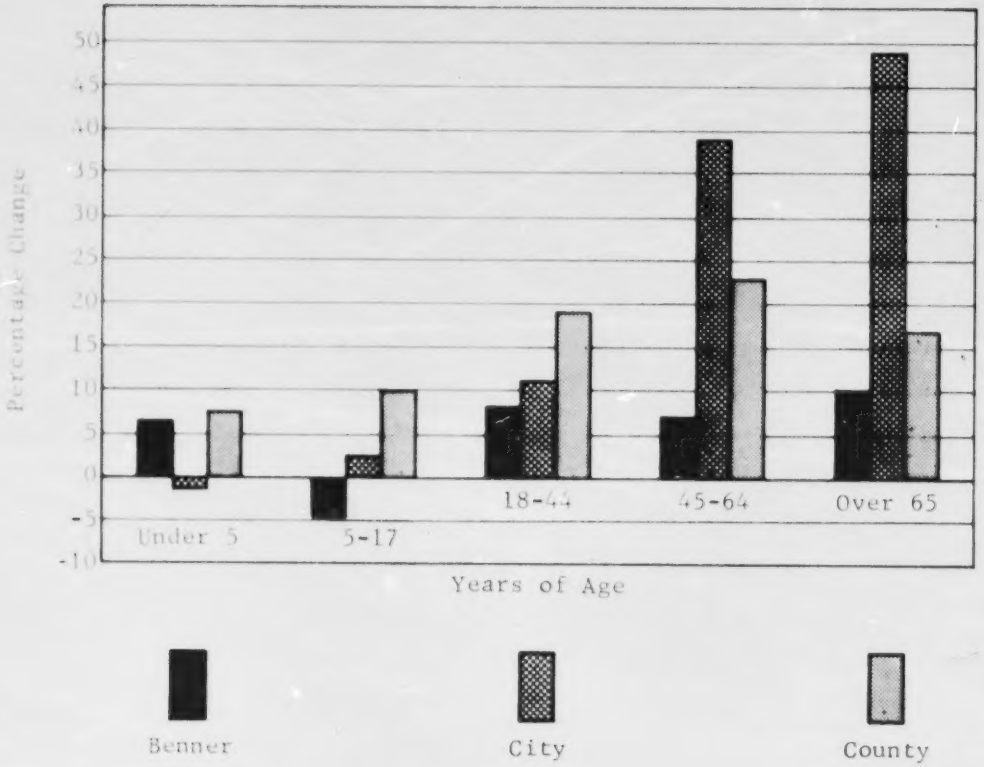


Figure 19

PROFILE '70 EXCERPT

HOUSING		Total Housing Units (HU)		1870	100 0	1209	100 0	661	54 7	126	66
		Occupied Housing Units	Total	1833	98 0	1179	97 5	654	55 5	17 5	60
			Owner	1327	72 4	747	63 3	580	77 6	121	80
	12		Renter	506	27 6	432	36 7	74	17 1	87	129
		Vacant Housing Units		37	2 0	30	2 5	7	23 3	190 5	147
		Average Household Size	Owner Occupied	3 24	N A	4 28	N A	-1 04	-24 3	19	138
			Renter Occupied	3 62	N A	4 15	N A	-0 53	-12 8	28	34 5
		Value of Owner Occupied HU	Median	$22 000	N A						156
			Valued less than $15,000	11	1 5						103 5
			Valued more than $35,000	2	0 3						204
	13	Contract Rent for Renter Occupied HU	Median	$161	N A						81
			Monthly rent less than $100	44	8 8						112
			Monthly rent more than $200	41	8 2						125
		HU's In Structure	1 (Single Family)	1112	59 5	1100	91 0	12	1 1	58	142
			2+ (Multiple Family)	172	9 2	88	7 3	84	95 5	153	150
			Mobile Homes	586	31 3	21	1 7	565	2690 5	37	5
		No of Years in HU	Less than 2 Yrs	946	51 6						52
	14		More than 20 Yrs	7	0 4						173
		HU's Built Before 1950		75	4 0						142
		HU's Built After 1965		468	25 0						52 5
	15	Crowding HU's with 1 01 or more PPR	Total	187	10 2						45
			White SSL	55	25 0						35 5
	16	Rent-to-Income Indicator (See Notes)		N A	77 3						76
	17	Households With No Cars		57	3 1						125
		Transp to Work (Workers)	Private Auto	2121	91 5						68 5
			Public Transportation	57	2 5						69 5

PERCENTAGE OF HOUSING TYPES FOR
CENSUS TRACT 5048.01

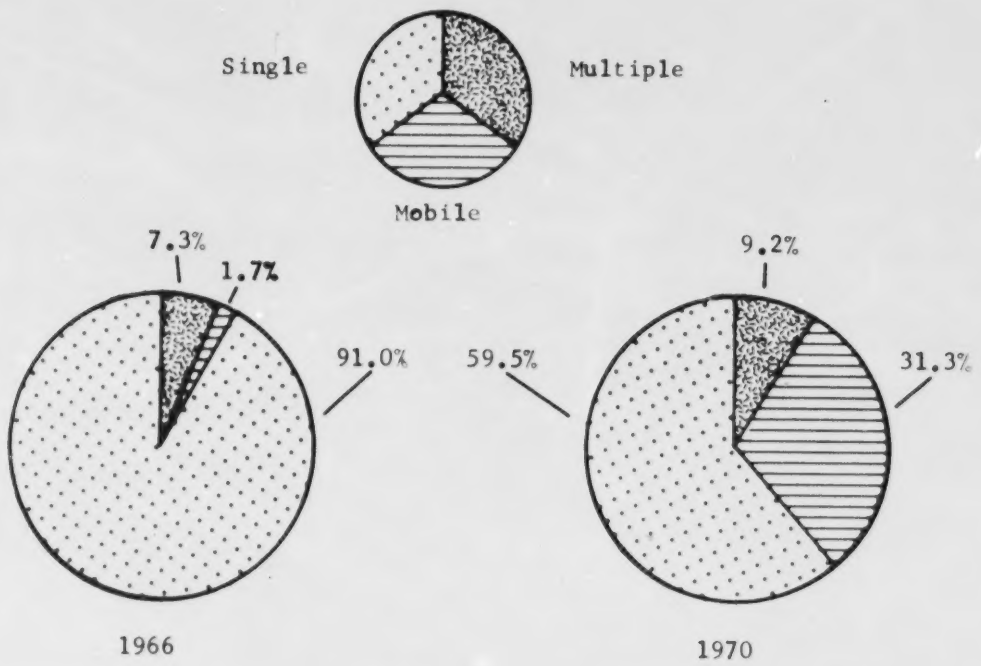


Figure 20

PROFILE '70 EXTRACTS:
MINORITY POPULATION DISTRIBUTION - SUNNYVALE SCHOOL DISTRICT

Figure 21

1970 U.S. CENSUS EXTRACTS
AGE AND MEDIAN VALUE OF OWNER OCCUPIED HOUSING UNITS - SUNNYVALE SCHOOL DISTRICT

Figure 22. This map combines median income and ethnic distribution data, available from the U.S. Census, with information available from a city directory of officials. Again, proving with hard facts what was already intuitively felt by the group can play an important part in winning the support needed to remedy the situation.

Figure 23 offers a profile of the high school dropout rate and the juvenile probation rate of an intermediate school attendance boundary. When compared with the city and county, these rates begin to pinpoint areas of special need. Similar comparisons can be made using information about drug abuse, vandalism and truancy.

The display techniques presented here are but a sampling of the possibilities open to the planning group. The kinds of data needed for a master planning effort will vary with the special needs and characteristics of a school district. In every effort, however, the value of the data collected will only be realized when it has been effectively displayed.

Figure 22

1970 U.S. CENSUS EXTRACTS
MEDIAN INCOME AND COMMUNITY DECISION MAKERS - SUNNYVALE SCHOOL DISTRICT

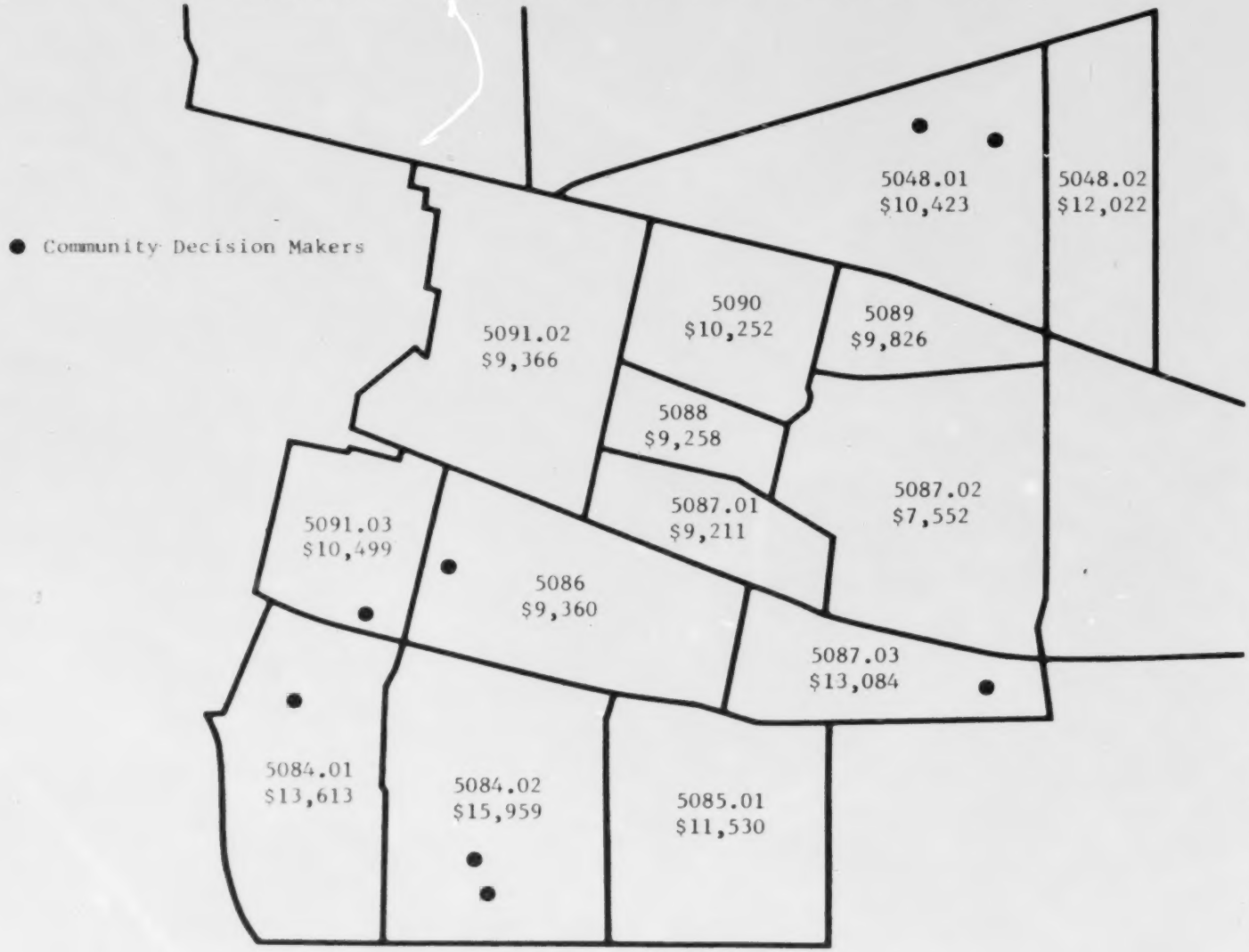
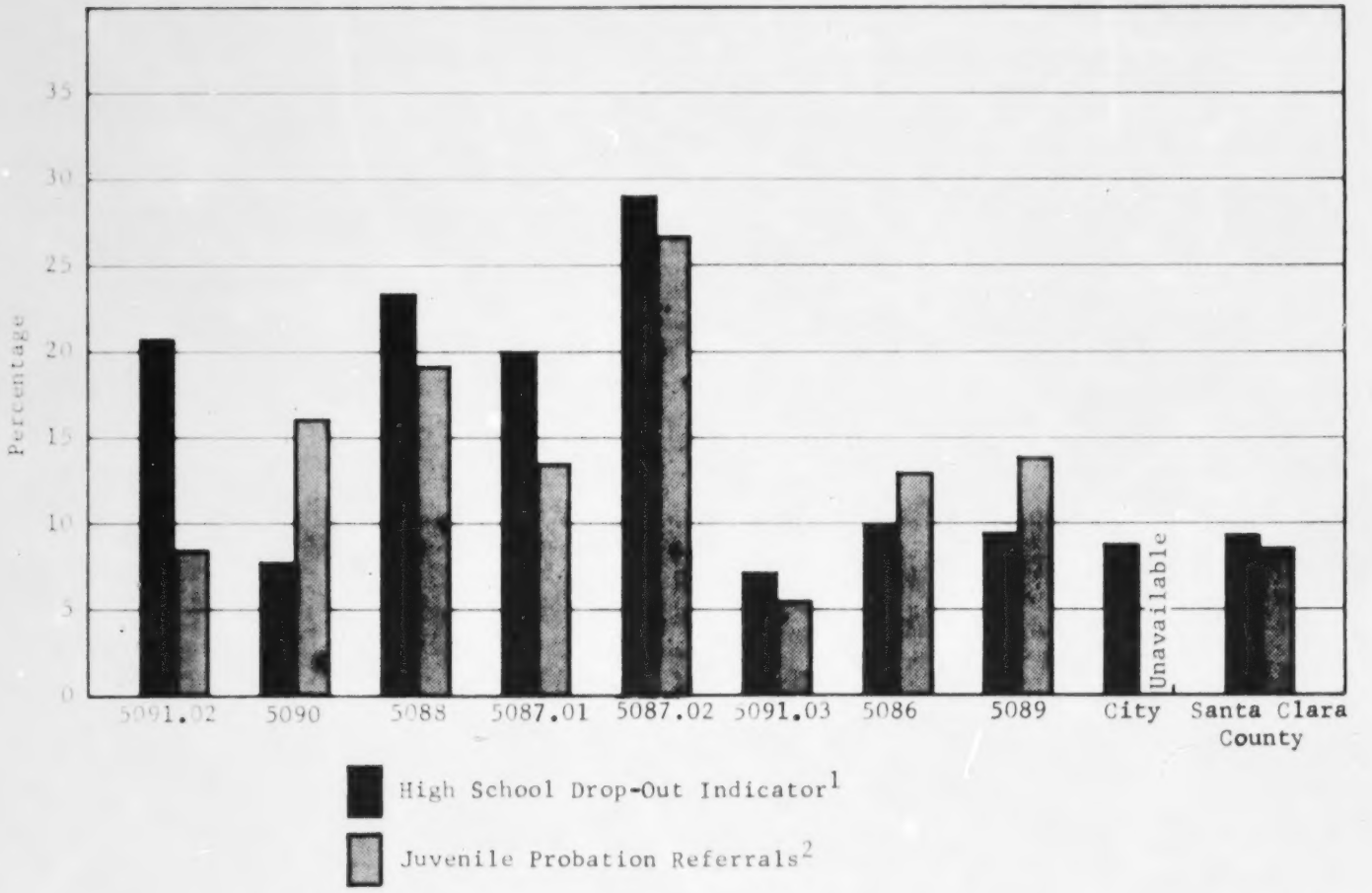


Figure 23

PROFILE '70 EXTRACTS:
HIGH SCHOOL DROP-OUT INDICATOR AND JUVENILE PROBATION REFERRALS
BENNER INTERMEDIATE SCHOOL ATTENDANCE AREA



[1] % of persons aged 16-21 not high school graduates and enrolled in school
[2] Population 10-17

PROFILING THE FUTURE - A POPULATION PROJECTION MODEL

Ultimately, educational planning is tied to predicting the numbers and characteristics of clients to be served in the future. Whatever forecasting techniques are used, community profiling must play an important part in developing information for the prediction.

Two enrollment forecasting methods have been abstracted in a previous section of this paper. A third technique currently under development is ENSIM II, a population projection model based partly on an analysis of land use and partly on the identification of population migrational patterns. Because it is dependent on a number of information variables described in the first three sections of this paper and because it requires the kind of interagency cooperation critical to community profiling, ENSIM II, its input, methodology and output are described below.

ENSIM II

The key to the ENSIM II forecasting technique is an in-depth assessment of household mobility. What types of families have a propensity for moving? What kinds of houses will certain types of families occupy? It is through a comparative analysis of two sets of census data that these questions are answered and input into the model. For ENSIM II to operate, all households, housing units and neighborhoods in the district must be classified by type according to a number of social and economic characteristics. Once this process of classification has been completed, probability matrices are used to predict the future state of the district. In addition to the census data, assessor's data, health department data and land use data are correlated via computer matching and comparison and then input into the model.

Thus, the sophisticated land use analysis techniques developed in ENSIM I are combined with a population mobility analysis to provide predictions of enrollments by numbers, composition and location. Figure 24, a logic flow diagram, depicts the inputs and processes. Ovals represent the inputs; rectangles represent the processes. Following the flow diagram are explanations of each of the twenty steps that comprise the model.

ENSIM II

Logic Flow Diagram

Figure 24

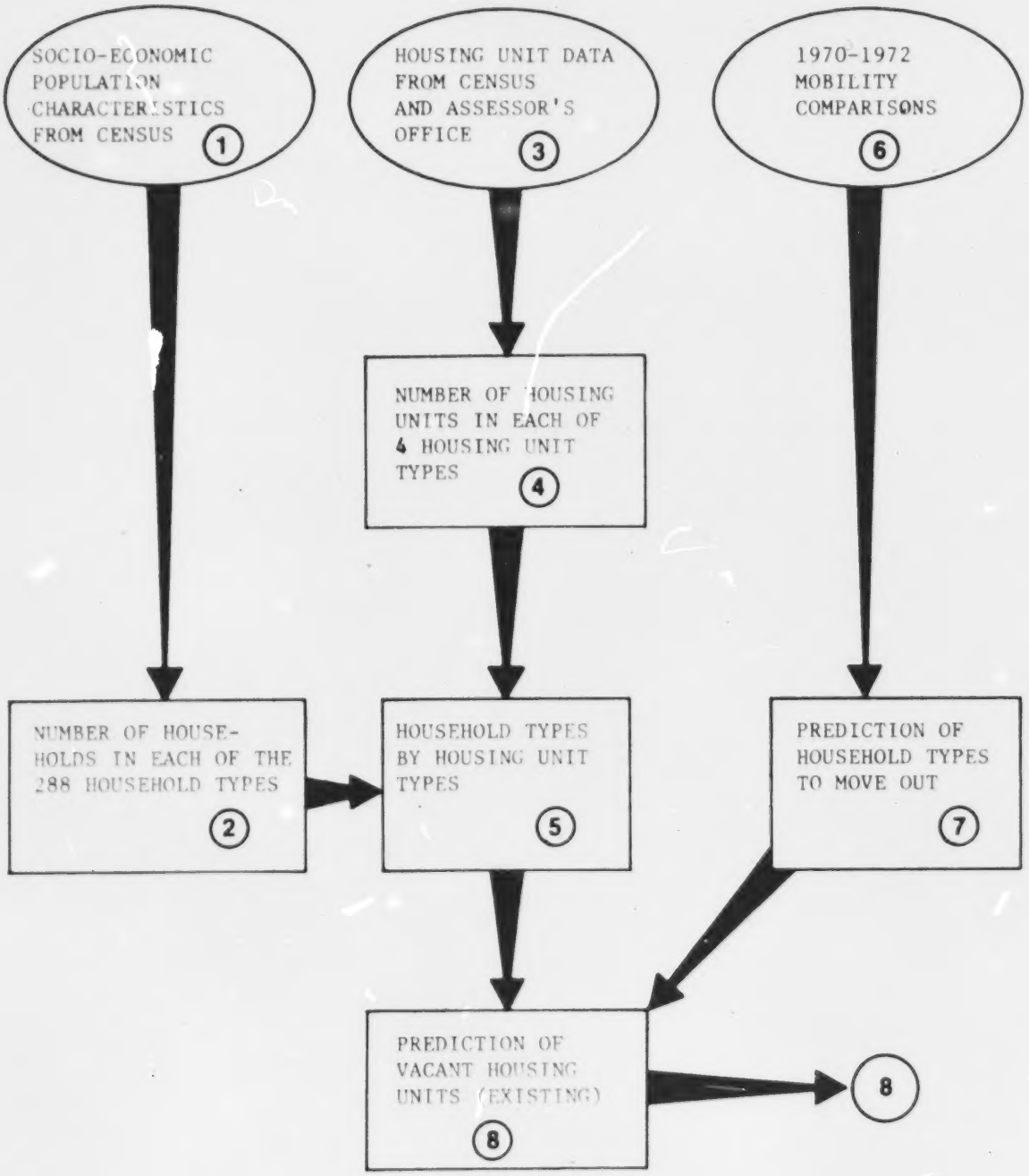
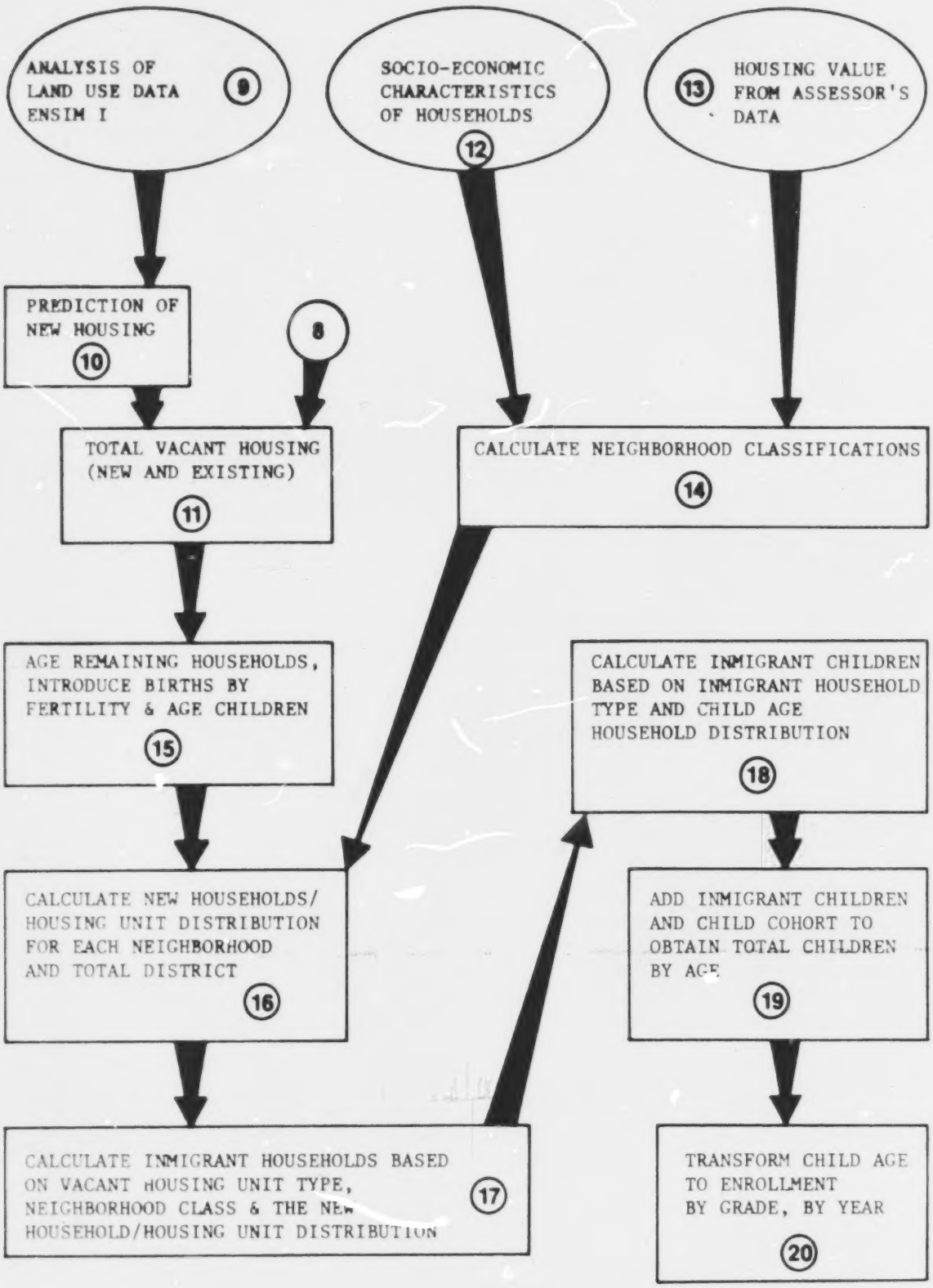


Figure 24 (cont.)


ANALYSIS OF LAND USE DATA ENSIM I
9
SOCIO-ECONOMIC CHARACTERISTICS OF HOUSEHOLDS
12
13
HOUSING VALUE FROM ASSESSOR'S DATA
PREDICTION OF NEW HOUSING
10
8
TOTAL VACANT HOUSING (NEW AND EXISTING)
11
CALCULATE NEIGHBORHOOD CLASSIFICATIONS
14
AGE REMAINING HOUSEHOLDS, INTRODUCE BIRTHS BY FERTILITY & AGE CHILDREN
15
CALCULATE INMIGRANT CHILDREN BASED ON INMIGRANT HOUSEHOLD TYPE AND CHILD AGE HOUSEHOLD DISTRIBUTION
18
CALCULATE NEW HOUSEHOLDS/ HOUSING UNIT DISTRIBUTION FOR EACH NEIGHBORHOOD AND TOTAL DISTRICT
16
ADD INMIGRANT CHILDREN AND CHILD COHORT TO OBTAIN TOTAL CHILDREN BY AGE
19
CALCULATE INMIGRANT HOUSEHOLDS BASED ON VACANT HOUSING UNIT TYPE, NEIGHBORHOOD CLASS & THE NEW HOUSEHOLD/HOUSING UNIT DISTRIBUTION
17
TRANSFORM CHILD AGE TO ENROLLMENT BY GRADE, BY YEAR
20

Key 1 - Basic socio-economic data from a special 1972 districtwide census are analyzed to determine types of households. The specific socio-economic variables are: income (3 classes), race (3 classes), tenure (2 classes), age of adult female (4 classes), number of children (4 classes). These data are obtained at the geographic block level and when combined, generate 288 possible household types.

Key 2 - Each household noted in the 1972 special district census is categorized into one of the 288 household types identified in Key 1. The outcome of this process is the number of households, in each of the 288 household types, that resided in the district in 1972. These data are defined at the neighborhood and block level, allowing small area predictions of change to be made.

Key 3 - Using the 1970 U.S. Census and the 1972 special district census, housing units are identified by four types - single family, duplex, multiple family, and mobile home.

Key 4 - The output of Key 3 is the number of housing units by type. These housing unit data are also collected at the neighborhood and block level.

Key 5 - The household data from Key 2 and the housing unit data from Key 4 are combined to form a household by housing unit matrix. This matrix makes up the household to housing unit distribution; i.e., the probability that a specific household type will occupy a specific housing unit type.

Key 6 - The 1970 U.S. Census and the 1972 special district census are analyzed to determine which households have moved out of the district since 1970. The outcome of this analysis is a household mobility coefficient.

Key 7 - The household mobility coefficient from Key 6 is applied against the household types to give a prediction of the number of households, by type, that will outmigrate during a given year.

Key 8 - The prediction of the number of households, by type, that will outmigrate is applied against the household by housing unit distribution to predict the number and type of existing housing units that will be vacated during the year.

Key 9 - A land use analysis, using the techniques outlined in the ENSIM I abstract, is made to determine the number and type of new housing units to be built in specific neighborhood areas each year of the prediction period.

Key 10 - The output of Key 9 is a prediction of the number of new housing units by block for the district.

Key 11 - The combination of outputs from Keys 8 and 10 provides the total number of vacant housing units identified at the block level.

Key 12 - The number of children per household and the percent of minority households are two variables aggregated to give block and neighborhood figures on indicators of neighborhood class.

Key 13 - The county assessor's data on housing values are aggregated to the block and neighborhood level.

Key 14 - The outputs from Keys 12 and 13 are combined and analyzed to identify 75 different neighborhood types.

Key 15 - The remaining households are "aged," births are introduced by fertility rate, and the remaining child cohort is "aged."

Key 16 - A new household to housing unit matrix is built using the remaining households after deleting the outmigrants, the occupied housing stock, and the neighborhood classifications from Key 14.

Key 17 - Inmigrant households are then calculated based upon the vacant housing types available for occupancy, neighborhood classifications, and the new household to housing unit distribution. This, then, is a prediction of the type and number of households which will move into the district during the year.

Key 18 - The number of children who will migrate into the district per household is calculated using the inmigrant household types and a child age to household distribution of the remaining households. This calculation is made at the block level and aggregated to neighborhood and district totals.

Key 19 - Inmigrant children from Key 18 are added to the remaining child cohort from Key 15, giving the total children by age for the fall enrollment.

Key 20 - The children by age from Key 19 are transformed to an enrollment prediction by grade based on district historic age to grade conversion data. Thus, the output of ENSIM II is an enrollment prediction, by grade, by race, by year at the block level and aggregated to the neighborhood and district levels. Because they are at the block level, enrollment forecasts can be input into a geodata analysis and display system for use in attendance boundary adjustments and transportation planning.

As the logic flow diagram and its explanatory keys demonstrate, the ENSIM II model requires a broad range of information about the community: its use of land, the numbers and composition of its people, the characteristics of its housing. While this enrollment simulation model is unique in its approach to projecting a district's future clientele, its input variables have an almost universal significance to the educational planning effort.

CONCLUSION

Community profiling is not a new concept to the educational planner. School administrators have long felt the need to better understand the communities they serve. Because of the overwhelming amount and variety of community information, however, planners and administrators have too frequently been unable to effectively shape this information into a comprehensive snapshot of their planning area. Moreover, the multitude of agencies whose job it is to collect and store this information have not built the communication links necessary for inter-agency cooperation and sharing. For these reasons, administrators have relied heavily upon school data, with a sprinkling of intuitive community understanding, in planning educational programs and facilities.

But why go beyond intuition? When does a single data item or piece of information become relevant to education?

In the preceding sections, the authors have outlined data elements that they feel have significance for the educational planners. And in nearly every section, the authors have noted that the significance of a particular piece of information will depend largely on the particular circumstance of the planning activity. But the relevance of a data element has an even greater dependence on the scope with which the planner views his community/school, and indeed, his world.

How much relevance has the issuance of a building permit to next year's third grade curriculum? Probably none, unless those planning next year's curriculum are committed to a community-oriented planning approach and unless they can see, or choose to see, the increasing inter-dependency that all public institutions have on one another as society grows ever more complex. Today, public education is no longer solely responsible for what and how people learn. Learning is a twenty-four-hour-a-day process, beginning at birth and ending at death. It takes place at school and on the job, in the home and throughout the community. Good or bad, the community is becoming the classroom, and the effectiveness of that classroom will be determined by the kind of planning that is done for the total community.

It is hoped that this paper has highlighted the usefulness of "fugitive" community data to educational planning as well as the critical importance of cooperative efforts between all agencies whose task it is to provide community services. But even more, it is hoped that this paper has suggested some paths away from the traditional school planning context and toward the broader community/school planning context.

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